

PERSPECTIVES FROM THE FIELD:
AN EVALUATION OF THE U.S. ARMY CORPS OF ENGINEERS
INTERPRETIVE SERVICES AND OUTREACH PROGRAM

By

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ABSTRACT

As the nation's largest federal provider of outdoor recreation, the U.S. Army Corps of Engineers (Corps) manages 12 million acres of lands and waters at Corps water resource development projects across the country (U.S. Army Corps of Engineers, 2011). Despite this fact, the Corps is not well known for the recreation program it provides or the conservation values it shares with some of the other large federal land agencies in the U.S. The Corps' Interpretive Services and Outreach Program (ISOP) has the potential to be a large and successful component within the agency; however, this program has received little research attention. This study is the first thorough analysis of the Corps ISOP program since its inception 20 years ago.

The purpose of this two-phase sequential mixed methods study was to explore employee perspectives toward the Corps' ISOP, gaining insight into what makes the program what it is today. Using phone interviews (N=19) for ISOP program developers and leaders, and a written questionnaire (N=230) of front-line and supervisory rangers, the study also compiled data to explore the experiences, perceptions, and motivations of those who currently utilize the program. The study examined the factors that influence the effectiveness of the

ISOP program as well as the Corps' Water Safety Program – a component within the ISOP program.

The results showed that Corps interpreters are passionate about the ISOP program. Even within the constraints of the recent fiscal environment and budget cuts, those who developed the program, and the interpreters who use the program, believe it adds value to their facilities. They also contend that it is underutilized. Program developers frequently commented that the lack of management support at all levels prevented the program from achieving the same level of success as other Corps programs. In contrast, the water safety program of the Corps was frequently identified as a success. Participants believed that the water safety program had been singled out for priority attention, and thus had received support from the highest levels in the organization.

This study suggested that the level of participation in and emphasis on interpretation, the perceived level of management support for the ISOP program, and the perceived benefits to the project from ISOP were factors that influenced perceptions of ISOP program effectiveness. As these factors increased perceived effectiveness also increased. The most significant factors influencing perceived effectiveness of the Corps water safety program were the extent to which the participant perceives that the water safety program benefits their

project, and the extent to which he or she perceived that the fourth ISOP Goal, was effective at supporting the water safety program.

Study results and associated recommendations have the potential to positively impact not just the ISOP program, but the entire agency. The recommendations from this study were to: (1) invest in and further develop the excellence that exists already within the interpretive community of the Corps, (2) improve relationships with both internal and external audiences, repairing broken public trust as necessary, (3) expand the Corps' interpretive vision to encompass all the goals of the ISOP program, (4) identify and incorporate efficiencies into ISOP program implementation, and (5) inspire continued success in the Water Safety program through creative solutions instead of unfunded mandates.

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INTRODUCTION

The U.S. Army Corps of Engineers (Corps) is a vast agency with a multitude of missions ranging from navigation and flood control to wetland mitigation and army infrastructure support. The diversity of the agency compounded by a strong military mission means that smaller programs may not receive the same attention or level of importance as other management priorities. The Interpretive Services and Outreach Program (ISOP) is a small program nested within the civil works side of the Corps. It falls within the Natural Resources mission of the Corps, which states:

The Army Corps of Engineers is the steward of the lands and waters at Corps water resources projects. Its Natural Resource Management Mission is to manage and conserve those natural resources, consistent with ecosystem management principles, while providing quality public outdoor recreation experiences to serve the needs of present and future generations.

In all aspects of natural and cultural resources management, the Corps promotes awareness of environmental values and adheres to sound environmental stewardship, protection, compliance and restoration practices.

The Corps manages for long-term public access to, and use of, the natural resources in cooperation with other Federal, State, and local agencies as well as the private sector.

The Corps integrates the management of diverse natural resource components such as fish, wildlife, forests, wetlands, grasslands, soil, air, and water with the provision of public recreation opportunities. The Corps conserves natural resources

and provides public recreation opportunities that contribute to the quality of American life. (U.S. Army Corps of Engineers, 1996)

Some Corps rangers were concerned that the ISOP program was not recognized as a management tool that could enhance the way in which the Corps does business, not just in the natural resource management branch, but in all of the Corps missions. Because managers do not always embrace the philosophy that interpretation is an important tool, the ISOP program lacked consistent management support and adequate financial allocations to make the program successful nationally.

The history of the Corps goes back to the days of the American Revolution. The Army established the Corps of Engineers as a separate, permanent branch in 1802, and gave the engineers responsibility for founding and operating the U.S. Military Academy at West Point. The Corps has played an integral part in the development of the country. In the 19th Century, the Corps built coastal fortifications, surveyed roads, eliminated navigation hazards, explored and mapped the American West, including places like Yosemite and Yellowstone, and constructed buildings and monuments in Washington, D.C. In the 20th Century, the Corps expanded its civil works mission and became the lead agency for flood control, a major hydropower producer, and the nation's leading provider for recreation. Other missions of military construction, research and design, environmental preservation and restoration, and natural disaster

response have been added over the years (U.S. Army Corps of Engineers, 2013).

Over the last century, the Corps constructed federal dams whose primary purposes included flood control, navigation, and hydropower. These projects impounded billions of acre-feet of water – water that the public demanded be made available for public water supplies and recreational pursuits. As visitation to these projects increased, so did the number of management issues. Some management issues were depreciative behavior in campgrounds such as limb removal from trees, nails in trees, littered campsites, excessive noise and carvings on trees (Fritschen, 1983). Other studies looked at importance-performance analysis of facilities (Mills, 1984) and recreation carrying capacity (Urban Research and Development Corporation, 1980).

In 1980, the Chief of Engineers' Environmental Advisory Board made two recommendations (1) the scope and function of the Corps' interpretive programs should be reviewed to establish an overall philosophy for interpretive activities, and (2) the academic and other qualifications of interpretive personnel should be reviewed (Fritschen, 1983, p.1).

At the time of the Board's mandate in 1980, the Corps' ISOP program had not been established officially as the program it is today. The first study conducted by the Corps on interpretation was conducted in 1980 (Fritschen,

1983). In August of 1981, as a result of that study, the agency commissioned “A Guide to Cultural and Environmental Interpretation in the U.S. Army Corps of Engineers.” This was the first documented effort to outline what interpretive services and opportunities should be provided at Corps facilities. As a result, the Visitor Perception and Interpretive Services Program was created. The goal of this program was to “inform and educate the public with regard to the purposes and concepts of operation of the water project and the historical and natural features of the area” (Propst & Roggenbuck, 1981, p. 8).

The Corps created a required training course on interpretation within their natural resources program. This training is one of the Proponent Sponsored Engineer Corps Training (PROSPECT) courses. Since 1986, over 1,500 park rangers have taken this course (U.S. Army Corps of Engineers, 2013d). In the Corps’ Career Development Guide for Civil Works Natural Resources Management Team Members, EP-690-2-2, the course is recommended but not required for natural resource personnel (U.S. Army Corps of Engineers, 1994). This course has been taught by contractors such as John Ververka, author of *Interpretive Master Planning* (Ververka, 1998), and William Lewis, author of *Interpreting for Park Visitors* (Lewis, 1989) and Corps personnel. In the early 1990’s the Visitor Perception and Interpretive Services Program received a facelift. In September of 1993, the Corps created the Engineer Pamphlet (EP)

1130-2-434. The EP 1130-2-434 established the policy for the Corps Interpretive Services and Outreach Program (U.S. Army Corps of Engineers, 1993). All interpretive programs are entered into the Operations and Maintenance Business Information Link, a nationwide database known as OMBIL (U.S. Army Corps of Engineers, 2007c). This database records information on a limited number of interpretive services, dividing programs into six categories; corps mission, cultural/historical, environmental, general safety, project tours, and water safety (U.S. Army Corps of Engineers, 2007c).

There are 422 Corps lakes across the United States (U.S. Army Corps of Engineers, 2011). At most Corps lakes only a few rangers actively engage in interpretation as a portion of their duties. The remainder of the staff works in other programs, such as visitor assistance, contract administration, recreation or natural resource management. With most Corps facilities located on public waterways, a main emphasis in interpretation over the years has been the Corps Water Safety Program.

Since October 2011, Corps park rangers presented over 29,000 programs to over 3.5 million people (U.S. Army Corps of Engineers, 2013b). Interpretation within the Corps had been around for decades; however, the effectiveness of the program was most commonly measured in terms of the decline of drowning and boating accidents or the economic impacts from recreation, or the number of

pamphlets, coloring books or other publications handed out at sites. Although a numerical breakdown can tell the Corps some information about the range and extent of program outputs, no study to date has attempted to quantify or assess interpretative outcomes and impacts within the Corps of Engineers. That is, program managers cannot assess in what ways, to what extent, and under what circumstances various national and site specific programmatic efforts are effective (Patton, 2002).

Until now, only one study has evaluated the Corps ISOP program (Propst & Roggenbuck, 1981). According to Knudson, Cable and Beck (2003), "An organization that fails to evaluate indicates disrespect for its interpreters and disregard for the products of their work. This translates into little concern with the quality of experience of the visitors. To show value, evaluate" (p. 367). The Corps, like other agencies, is facing the age of federal budget cuts. Ammerman (2006) stated in her analysis of the NPS Interpretive Development Program, "Any profession needs to evaluate the effectiveness and quality of its services if it is to continue to appropriately serve its clientele, as well as to be viewed as legitimate." In an agency where interpretation is low on the radar screen compared to homeland security and war efforts, it is a dire mistake not to evaluate the significance and effectiveness of the program. In contrast, the Corps has an entire research division dedicated to researching Corps specific issues

such as modeling water flows, cold region engineering research, and how to improve the way of life in cold regions. In 1984, a study was done to look at the rangers' perceptions of the Visitor Assistance (VA) program. The purpose of the study was to have rangers provide some valuable insight into the program because they were the ones in the enforcement role (Wadzinski, 1984). Valuable insight can be gained from the ranger staff at Corps facilities on their perceptions of the ISOP Program as well.

There are several reasons for this study. First, the Corps has continued to support ISOP in terms of its official policy and mandates. Second, there is a large workforce within the natural resources section of the Corps that utilizes the ISOP, but does so with potential constraints. These constraints vary across projects, districts and divisions, but may consist of a lack of communication between field and upper management, a lack of support from management, and a lack of funding resulting in reprioritizing interpretation as a low priority, to name just a few. Third, the ISOP program is in its 20th year of operation without any analysis of its effectiveness. Thus, it is unclear which if any program elements have achieved their objectives and which procedures have facilitated success. This study is the first thorough analysis of the Corps ISOP program since its inception 20 years ago. The study explored the strengths, weaknesses, and opportunities related to the ISOP program, and identified threats that may impede progress in

accomplishing program objectives over the long term. As such, this effort provides guidance for the future implementation and development of the program.

Finally, this study may prompt the Corps to maintain and/or increase budgetary support for the ISOP program. This study also outlines possible future directions for the ISOP program, including an evaluation of ISOP goals, ISOP program evaluation strategies, and recommendations to enhance the ISOP program and improve effectiveness. This study may also assist other agencies in their efforts to assess their overall interpretive effectiveness.

Research Objectives

The purpose of this two-phase sequential mixed methods study was to explore the perspectives toward the Corps' Interpretive Services and Outreach Program (ISOP) from the senior staff that helped make the program what it is today, and the front line and supervisory rangers who currently utilize the program. The objectives of this study included the following:

1. Identify the original intent of the developers of the ISOP, examine their current perspective towards the program, and

explore the views of a broad cross-section of interpreters across the agency.

2. Examine the factors, including participant involvement in interpretation, perceived management support for ISOP, and perceived project benefits from ISOP that influence the effectiveness of the ISOP program.
3. Examine the factors of participant involvement in interpretation, perceived management support for ISOP, and perceived project benefits from ISOP that influence the effectiveness of the Corps' Water Safety Program.

LITERATURE REVIEW

This literature review provides the framework for exploring interpretive effectiveness within the Corps. It starts by (1) defining interpretation across a range of agencies and organizations. This provides background information on the differences and similarities between the Corps and other interpretive minded agencies and organizations. The literature review will then (2) compare the goals and objectives of interpretation used by the major federal land management agencies. This summary will highlight the niche filled by the Corps as well as the niches by other agencies. By comparing different agency goals for interpretation, a (3) more complete assessment of agency and program effectiveness may be obtained. Finally, the study will (4) outline the history of the Corps ISOP program and discuss how it measures up in relation to various evaluation criteria.

Definitions of Interpretation

The essence of interpretation was articulated in 1957 by Freeman Tilden. In *Interpreting Our Heritage*, Tilden defines interpretation as “An educational activity which aims to reveal meanings and relationships through the use of

original objects, by firsthand experience, and by illustrative media, rather than simply to communicate factual information” (Tilden, 1957, p. 8).

He also laid out six principles for interpretation still used today as the guiding principles of the profession. They are:

1. Any interpretation that does not somehow relate what is being displayed or described to something within the personality or experience or of the visitor will be sterile.
2. Information, as such, is not Interpretation. Interpretation is revelation based upon information. But they are entirely different things. However, all interpretation includes information.
3. Interpretation is an art, which combines many arts, whether the materials presented are scientific, historical, or architectural. Any art is in some degree teachable.
4. The chief aim of Interpretation is not instruction, but provocation.
5. Interpretation should aim to present a whole rather than a part, and must address itself to the whole man rather than any phase.
6. Interpretation addressed to children (say, up to the age of twelve) should not be a dilution of the presentation to adults, but should follow a fundamentally different approach. To be at its best it will require a separate program (Tilden, 1957, p. 9).

From this initial definition and principles, other definitions have followed. The National Association for Interpretation (NAI) defines interpretation as a communication process that forges emotional and intellectual connections between the interests of the audience and the meanings inherent in the resource (National Association for Interpretation, 2007). In 1998, NAI created a certification program with six categories emphasizing six different skill sets considered essential to effective interpretive performance. The program was created “as a way of recognizing that a certain level of proficiency in the art and science of interpretation had been attained” (Brochu & Merriman, 2006).

The organization called Interpretation Canada has developed the following definition: “Interpretation is a communication process designed to reveal meanings and relationships of our cultural and natural heritage to the public (visitors) through first-hand experiences with objects, artifacts, landscapes or sites” (Interpretation Canada, 1976).

The leading federal agency employing interpreters in the United States is the National Park Service (NPS), which currently employs approximately 4,100 interpreters in a variety of different seasonal and permanent positions (Ammerman, 2006). The NPS revamped its training program in 1995 shifting from a previous emphasis on interpretive skills courses to a competency-based training and professional development approach. The Interpretive Development

Program (IDP) embodies the NPS interpretive philosophy, curriculum, and certification programs. The IDP states that interpretation facilitates a connection between the interests of the visitor and the meanings of the resource (National Park Service, 2006).

The Corps defines interpretation as:

Communication and education processes provided to internal and external audiences, which support the accomplishments of the agency's missions, tell the agency's story and reveal the meanings of and relationships between natural, cultural, and created environments and their features (US Army Corps of Engineers, 1993, p. 4).

The key is to help people connect to and relate to the sites associated with the Corps, leading to their ongoing involvement and support. Interpretation can be accomplished through displays, brochures, visitor center exhibits, and interpersonal contacts (U.S. Army Corps of Engineers, 2006). Although all of the definitions listed above have common elements to them, using words like meanings, connections, resources, and relationships, the Corps definition seemed to narrow the focus. Why the Corps chose to add an additional focus of supporting the accomplishments toward agency missions is another factor this study explored.

Historic Trends in ISOP for the Corps

The Corps originally entered the business of interpretation without a top-down mandate as rangers used various communication strategies to combat management issues at the water resource projects. Back then, and even today, the first response to these issues was often to post a sign stating prohibited activities and listing possible fines and/or punishment. Van de Kamp, Johnson, and Swearingen (1994) found that after reviewing depreciative behavior studies in parks, a multi-pronged approach should be used due to the complexities of controlling non-compliant behavior among visitors.

Interpretation was added to the Natural Resources program as a result of a study commissioned by Corps Headquarters in 1980. This study resulted in the creation of a guidance document entitled, "A Guide to Cultural and Environmental Interpretation in the U.S. Army Corps of Engineers." The purpose of the manual was to provide guidance to Corps personnel in developing various personal and non-personal interpretative services at water resource projects. The manual was divided into seven sections: a definition of interpretation and its role in the Corps, interpretive objectives, messages the Corps wanted to emphasize, visitor understanding, choosing appropriate media, training interpretive personnel, and evaluating programs (Propst & Roggenbuck, 1981).

The goals of the Visitor Perception and Interpretive Services Program, as it was referred at the time, were as follows:

1. To enhance visitor understanding, appreciation, and enjoyment of the project area by interpreting scenic, natural, and cultural resources.
2. To aid recreation-resource management objectives by interpreting management activities and problems, and relating wise use or resources to the visitors.
3. To assist the public in finding and using project facilities and attractions by developing orientation programs and facilities.
4. To gain public support by promoting and understanding of the Corps of Engineers' programs and activities (Propst & Roggenbuck, 1981, p. 8).

The manual stressed the need for objectives at the national level, project level and program level. However, according to Propst and Roggenbuck (1981), evaluation objectives were developed at a program level and needed to be specific, time-bounded, measurable, and stated in terms of outputs or outcomes. The guide made suggestions for suitable objectives at a national level, such as explaining the Corps' role in water resource management and reducing resource management problems, but there was no mention of any way to measure the

effectiveness of the national program. The guidance document suggested that policy goals would be implemented and evaluated at the project level.

In the survey conducted to provide assistance in developing “A Guide to Cultural and Environmental Interpretation in the U.S. Army Corps of Engineers” Fritschen found that only one-sixth of the projects represented in the survey had an interpretive master plan and that one-third had an interpretive prospectus. When asked about training manuals, only 15 of 125 project offices had interpretation manuals (Fritschen, 1983). The project interpretive goals most frequently listed included explaining the mission of the Corps (42%), promoting safety (30%), communicating resource information (29%), introducing environmental issues (25%), explaining the project mission (24%), orienting visitors to facilities (22%), and accomplishing management objectives (22%), (Fritschen). Seventy percent of employees surveyed said that additional training was needed and only 25% of those surveyed spent more than half of their time on interpretation duties.

There has been one revision process of the Corps interpretation program since its inception in the 1980's. Although this process took place in the early 1990's, to date the author has not found any records documenting the actions of the committee who suggested the changes. Identifying these changes will be explored as part of this study. As the leading provider of outdoor recreation on all

federally-managed public lands in the United States, the Corps ISOP has had to have abundant opportunities to communicate the Corps mission and accomplishments, achieved various management objectives, and fostered environmental stewardship, despite the lack of revisions or evaluation. By reaching diverse audiences and partners, ISOP staff improved visitor and employee safety, helped with team cohesiveness, and enhanced visitor's experiences by providing interpretive services to meet their needs. The ISOP has been one of the most effective tools the agency has to connect with the general public, as well as to diverse user groups and stakeholders (U.S. Army Corps of Engineers, 2006).

In 2000, the Deputy Commander for Civil Works approved the Visitor Center Initiative. A team of eight Corps employees from headquarters, division, district and field offices spent two years identifying issues, surveying Corps visitor center managers, holding focus group discussions and analyzing the results. This group looked at almost every aspect of Corps visitor centers from staffing and exhibit issues to partnerships and a Corps story exhibit that could be utilized in all Corps visitor centers. Interpretation as a whole was not a focus of this initiative; however it was found that the Visitor Center Program was a component of the ISOP (US Army Corps of Engineers, 2002). In 2004, a visitor center survey

was approved and mandated for distribution to the public visiting Corps visitor centers. A copy of the survey can be found in Appendix A.

History of the Corps Water Safety Program

The history of the Corps early involvement in water safety is not clearly documented, but it has been one of the leading interpretive efforts nation-wide. Corps staff were among the founders of the National Water Safety Congress over 50 years ago. In the mid-1970's, the Chief of Engineers noted that nearly 500 lives had been lost at Corps lakes and waterways in a single year. Recognizing that more effort was needed to improve public safety, the first official directive was issued for the Corps to amplify their water safety educational efforts.

In 1986, the National Water Safety Program was centralized to improve the quality and distribution of products throughout the Corps. These products included a variety of water safety brochures, posters, coloring books and other marketing tools to aid in the water safety message. In 1994, the National Operations Center (NOC) for Water Safety was placed in the Walla Walla District. All water safety product development and program oversight responsibilities shifted to the NOC. This move maintained the centralized program while facilitating more grassroots level involvement. As part of that

grassroots effort, a product advisory committee comprised of Natural Resource Management representatives from all Corps Divisions was created to provide input into the program and improve field level involvement (U.S. Army Corps of Engineers, 2007a). In 2006, a new directive was issued by Corps Headquarters to reduce the number of recreation related fatalities at Corps projects by 40% by September of 2008 (U.S. Army Corps of Engineers, 2007b). In 2012 a second, similar initiative was issued by Major General Walsh to reduce recreation related fatalities by 50% by the end of fiscal year 2014 (U.S. Army Corps of Engineers, 2012). A surge of water safety programs and products is currently sweeping Corps projects in an attempt to meet this new performance objective. In 2006, before either of the objectives, water safety programs reached 885,882 people. In 2012, water safety programs reached 2,438,940 people (U.S. Army Corps of Engineers 2013b).

Success rates for the program are typically measured by declining numbers of boating accidents and drownings despite significant annual increases in water recreation. No studies within the Corps have looked at which interpretive techniques within the water safety program have been most effective, whether it is the water safety products and promotions, ranger-led programs or a combination of both.

Comparison of Public Land Management Agencies' Goals for Interpretation

The major public land management agencies across the United States have had diverse missions. Managing public lands and waterways comes with many responsibilities; first and foremost is meet public needs and expectations. Visitors encompass a diverse array of attitudes, expectations and behaviors. Interpretation is a tool that helps visitors connect to the area's resources. If interpretation is adequately applied, it can lead to preservation of those resources (Tubbs, 2003). In Australia, interpretation is thought to be a minor activity in terms of the resources employed yet an important activity for all organizations that were surveyed (Department of Natural Resources and Environment, Victoria, 1999). Although comparable data do not exist for federal land management agencies in the U.S., all agencies continue to include interpretation in some way, shape or form in their shrinking budgets. The agencies included in this assessment are the U.S. Forest Service (USFS), Bureau of Land Management (BLM), U.S. Fish and Wildlife Service (FWS), Bureau of Reclamation (BOR), NPS, and the Corps.

Although missions within these federal agencies vary greatly, there were similarities in many of their goals for interpretation. Table 1 outlines the interpretive goals of each agency. An expanded version of Table 1 can be found

in Appendix B. This expanded version replaces the goal phrases listed in Table 1 with the actual wording found in the source documents. The six goals listed were common goals within most agencies. Promoting education that leads to stewardship and a quality visitor experience were the most common shared goals. The wording for each goal varies but the central idea was the same throughout. The list of goals that were used to prepare the chart of each agencies' goals can be found in Appendix C.

The source material used to prepare this table were not always the easiest documents to locate; thus, frequently internal assistance was required from agency employees. The documents referenced in Appendix C were selected because they represented the primary interpretive documents for the agency. There were two exceptions to this selection procedure. The Bureau of Land Management was in the process of being updated. The second exception relates to the National Park Service. The most current documentation that specifically lists interpretive goals came from a 2005 Director's Order which narrowed the focus of NPS goals. Due to this narrowed focus, another source was added. This source was the NPS 2006 of NPS Servicewide Interpretation and Education Evaluation Strategy, Volume Two. This document laid out a strategy for evaluation of the NPS Interpretation and Education program (National Park Service, 2006b).

Table 1. *Summary of Interpretive Goals for Federal Agencies*

Goals of Interpretation	COE	FWS	USFS	NPS	BOR	BLM
Interpretation as a management tool						
Achieve management objectives (COE, 1993, A) *	X					
Solve management problems (USFS, 1990, E)			X			
Reduce agency costs (BLM, 1983, A)						X
Develop public understanding of management (USFS, 1990, E)			X			
Mitigate resource user conflicts (BLM, 1983, C)						X
Minimize visitor conflicts (USFWS, 2006, F)		X				
Promote informed public involvement in management (BLM, 1983, D)						X
Use outreach to solve management problems (COE, 1993, D)	X					
Understand resource decisions, initiatives and stewardship actions (NPS, 2006b, T)				X		
Park neighbor and community gain understanding of significance and resources (NPS, 2006b, O)				X		
Education						
<i>Natural Resource Education</i>						
Provide info on natural resources (BOR, 2007, D)					X	
Increase visitor understanding of natural history principles and their relation to land management techniques (USFS, 2006, G)			X			
Promote visitor understanding of natural resources (USFWS, 2006, A)		X				

(COE, 1993; USFWS, 2006; USFS, 1990; NPS, 2005; BOR, 2007; BLM, 1983; NPS 2006b)

* The letter at the end of the reference coordinates with the lettering system in Appendix B

Table 1. *Summary of Interpretive Goals for Federal Agencies*

Goals of Interpretation		COE	FWS	USFS	NPS	BOR	BLM
23	Know natural environment (USFS, 1990, D)			X			
	Develop public awareness of society dependence on natural resources (BLM, 1983, G)						X
	Promote public recognition of the need to protect natural heritage (BLM, 1983, B)						X
	Understand conservation or preservation issues in park (NPS, 2006b, J)				X		
	<i>Cultural Resource Education</i>						
	Promote public recognition of the need to protect cultural heritage (BLM, 1983, B)						X
	Increase visitor understanding of cultural history principles and their relation to land management techniques (USFS, 1990, G)			X			
	Promote visitor understanding of cultural resources (USFWS, 2006, A)		X				
	Understand conservation or preservation issues in park (NPS, 2006b, J)				X		
	<i>Environmental Education</i>						
	Provide environmental education (COE, 1993, B)	X					
	<i>Water Education</i>						
	Educate public about water resources (BOR, 2007, F)					X	
	Educate public about water conservation (BOR, 2007, F)					X	

Table 1. *Summary of Interpretive Goals for Federal Agencies*

	Goals of Interpretation	COE	FWS	USFS	NPS	BOR	BLM
	Education public about water safety (BOR, 2007, F)					X	
	<i>Education Other</i>						
	Provide information on recreation (BOR, 2007, D)					X	
	Encourage interest in math and science (COE, 1993, E)	X					
	Learn new information and concepts about park (NPS, 2006b, B)				X		
	Learn new information and concepts about program (NPS, 2006b, B)				X		
	Achieve desired learning objectives (NPS, 2006b, G)				X		
24	Understand park and community resources in different contexts (NPS, 2006b, H)				X		
	Understand role park and community play in education objectives (NPS, 2006b, L)				X		
	Acquire skills and tools engaging students in parks as classrooms (NPS, 2006b, M)				X		
	Make use of parks and community as resources (NPS, 2006b, N)				X		
	Stewardship						
	<i>Ethic</i>						
	Personal stewardship ethic (NPS, 2005)				X		
	Develop Public land use ethic (BLM, 1983, A)						X

Table 1. *Summary of Interpretive Goals for Federal Agencies*

Goals of Interpretation	COE	FWS	USFS	NPS	BOR	BLM
<i>Stewardship of Natural Resources</i>						
Foster voluntary stewardship of natural resources (COE, 1993, B)	X					
Promote public recognition of protection of natural resources (BLM, 1983, B)						X
Promote increase appreciation for natural resources (USFWS, 2006, A)		X				
Develop a sense of stewardship and actions and attitudes reflecting a respect for wildlife resources (USFWS, 2006, B)		X				
Appreciate scientific benefits of park system (NPS, 2006b, C)				X		
<i>Stewardship of Cultural Resources</i>						
Foster voluntary stewardship of cultural resources (COE, 1993, B)	X					
Promote public recognition of protection of cultural resource (BLM, 1983, B)						X
Promote increase appreciation for cultural resources (USFWS, 2006, A)		X				
Develop a sense of stewardship and actions and attitudes reflecting a respect for cultural resources (USFWS, 2006, B)		X				
Appreciate historic, and cultural benefits of park system (NPS, 2006b, C)				X		
<i>Protection of Public Lands</i>						
Public cooperation in protection of public lands (BLM, 1983, A)						X

Table 1. *Summary of Interpretive Goals for Federal Agencies*

	Goals of Interpretation	COE	FWS	USFS	NPS	BOR	BLM
26	Develop a sense of stewardship and actions and attitudes reflecting a respect for environment (USFWS, 2006, B)		X				
	Preserve park resources (NPS, 2005)				X		
	Care about and care for park and values (NPS, 2006b, E)				X		
	<i>Other</i>						
	Foster voluntary stewardship of created resources (COE, 1993, B)	X					
	Greater appreciation for role of conservation (USFS, 1990, A)			X			
	Develop support for balancing use of resources (BLM, 1983, G)						X
	Use outreach to promote stewardship (COE, 1993, D)	X					
	Agency Missions						
	Visitor understanding of Agency (USFS, 1990, B)			X			
	Contribute to public understanding of agency practices that aid in management (USFS, 1990, F)			X			
	Incorporate agency missions into interpretation (COE, 1993, C)	X					
	Inform public about agency (BOR, 2007, A)					X	
	People understand refuge and agency (USFWS, 2006, C)		X				
	Use outreach to interpret agency missions (COE, 1993, D)	X					

Table 1. *Summary of Interpretive Goals for Federal Agencies*

Goals of Interpretation		COE	FWS	USFS	NPS	BOR	BLM
27	Understand purposes, scope, and significance of national park system (NPS, 2006b, B)				X		
	Understand parks place within National Park System (NPS, 2006b, I)				X		
	Neighbors and community understand park issues, mission and values (NPS, 2006b, O)				X		
Visitor Safety							
	Improve visitor and employee safety (COE, 1993, D)	X					
	Provide visitor safety (BOR, 2007, E)					X	
	Provide safe opportunities (USFWS, 2006, A)		X				
	Inform of health and safety hazards (BLM, 1983, F)						X
	Use outreach to help save lives (COE, 1993, D)	X					
	Safe park experience (NPS, 2006b, S)				X		
Visitor Orientation							
	Describe opportunities available (BOR, 2007, C)					X	
	Describe facilities available (BOR, 2007, C)					X	
	Inform of recreation opportunities (USFS, 1990, C)			X			
	Inform of recreation facilities (USFS, 1990, C)			X			
	Easy access to orientation information (NPS, 2006b, R)				X		

Table 1. *Summary of Interpretive Goals for Federal Agencies*

Goals of Interpretation		COE	FWS	USFS	NPS	BOR	BLM
Support							
	Broaden public support (NPS, 2005)				X		
	Expand numbers of association (USFS, 1990, F)			X			
	Attain knowledge, skills and abilities in support of interpretation (USFWS, 2006, E)		X				
Support continued							
28	Encourage career interest (COE, 1993, E)	X					
	Park staff have awareness of and connection to communities and organizations (NPS, 2006b, Q)				X		
	Appreciate economic benefit of park (NPS, 2006b, C)				X		
Visitor Experience							
<i>Recreational</i>							
	Memorable and meaningful recreational Experience (NPS, 2005)				X		
	Quality recreation experience (USFWS, 2006, D)		X				
	Enhance quality recreation opportunities (BOR, 2007, B)					X	
	Enhance visitor recreation experiences (BLM, 1983, E)						X
	Appreciate the recreational benefits of park system (NPS, 2006b, C)				X		

Table 1. *Summary of Interpretive Goals for Federal Agencies*

Goals of Interpretation		COE	FWS	USFS	NPS	BOR	BLM
<i>Educational</i>							
	Memorable and meaningful learning Experience (NPS, 2005)				X		
	Educational experience (NPS, 2006b, C)				X		
<i>Interpretive</i>							
	Quality interpretive experience (USFWS, 2006, C)		X				
<i>General</i>							
	Enhance visitor experience and enjoyment (COE, 1993, F)	X					
	Provide visitor enjoyment (BOR, 2007, E)					X	
	Enhance quality tourism opportunities (BOR, 2007, B)					X	
	Provide enjoyable opportunities (USFWS, 2006, A)		X				
	Provide accessible opportunities (USFWS, 2006, A)		X				
	Experience natural environment (USFS, 1990, D)			X			
	Find personal meaning and relevance (NPS, 2006b, A)				X		
	Enjoying, satisfying and memorable experience (NPS, 2006b, C, K)				X		

Table 1. *Summary of Interpretive Goals for Federal Agencies*

Goals of Interpretation	COE	FWS	USFS	NPS	BOR	BLM
Visitor Use						
Share experience with others (NPS, 2006b, D)				X		
Return to parks and visit other parks (NPS, 2006b, D)				X		
Experience without adverse impacts to park (NPS, 2006b, S)				X		
Other						
Underserved audience have stronger awareness of and connection to park (NPS, 2006b, P)				X		
Data collected through hands-on science contributes to knowledge (NPS, 2006b, U)				X		

Each agency varied in the number of goals listed. Although most of the goals fit into the six main categories, there were some goals that were unique to specific agencies. The Bureau of Land Management listed two different education/stewardship and support goals for their agency. The first dealt with public recognition of the need to protect our natural and cultural heritage for future generations and the second sought to increase public awareness of society's dependence on natural resources and their support for the principle of using the resources wisely (Bureau of Land Management, 1983). The Bureau of Reclamation also had a couple of education goals, but these differed from other agencies in that they emphasized educating the public about water resources, water conservation and water safety (Bureau of Reclamation, 2007). The Corps also had a goal that appears to be different than other agencies. It stated, "The interpretive process should also encourage interest in math and science, including career interest" (U.S. Army Corps of Engineers, 1996). This goal could have fit into the education category listed above, but it also included a unique goal of recruitment.

Private and non-profit groups often maintain education centers and provide interpretation as well. These organizations tend to have some of the same goals as federal agencies, including for example, providing educational opportunities that lead to stewardship and organizational support. Private sector

groups tend to emphasize specific causes. For example, the Rocky Mountain Elk Foundation operates the Elk Country Visitor Center in Missoula, Montana. The focus of this visitor center is teaching young and old alike the story of elk country, the threats it faces, the work of the Elk Foundation to mitigate those threats, and how individuals can get involved (Rocky Mountain Elk Foundation, 2007).

The Department of Natural Resources and Environment in Australia commissioned a study to look at interpretive best practices and ranked the top functions for interpretation as (1) Increasing visitor awareness and understanding of park/site values, (2) Increasing visitor enjoyment, and (3) Increasing community support for the organization/park/site (Department of Natural Resources and Environment, Victoria, 1999).

Measuring Effectiveness

Interpretive practitioners and researchers have puzzled over how to define and measure interpretive effectiveness for many years. Be it a visitor nodding his or her head in approval on a tour, a round of smiles and murmurs of “that was great, I didn’t know that about wolves” after a program, or the right answers on a quiz given to school children – all of these may be indicators that effective interpretation has occurred, but most of these cannot be translated on paper to dollar equivalents for ease in the budget allocation process.

For many years, few sensed a need to quantify the impacts of interpretation activities, and indeed, many feared that it was not feasible to do so (Mullins, 1984). Therefore, there was a reluctance to evaluate the actual impacts of interpretative services. As a result, in the early years there was little or no empirical evidence documenting the relationships between interpretation and visitor attitudes toward the resource or visitor behavior (McDonough & Lee, 1990).

In a time when agency budgets are shrinking, not measuring program effectiveness could no longer be an option. Programs must have shown demonstration of tangible results, and these results must be assessed within an overall benefit-cost ratio format. Since interpretive programs typically elude measurement, this makes benefit-cost assessment difficult at best (Ham, 1986). Most existing formal monitoring and evaluation in parks relate to visitor demographics and satisfaction with facilities rather than satisfaction with interpretive services (Department of Natural Resources and Environment, Victoria, 1999).

Objectives must be well-defined in order to evaluate a program and gauge effectiveness. Many organizations choose to use S.M.A.R.T. objectives. This system of checking the validity of objectives was first introduced in the book *The Practice of Management* by Peter Drucker (Drucker, 1954). Evaluators

recommended formulating objectives that are specific, measurable, appropriate, realistic, and time-bound. Objectives were specific about achievable results and were definable by quantitative or qualitative measures. Objectives also were defined in a manner that can achieve results in a timely and cost effective manner. This was true for an individual project as it was for the entire program of an agency.

In a study commissioned by the Corps on measuring recreation area operations and maintenance efficiency and effectiveness, the authors defined effectiveness in this manner: "Effectiveness relates outputs to program goals and infers the appropriateness of the outputs for meeting those goals" (Lawrence & Titre, 1984).

The Corps recognized as far back as 1981 that Corps interpreters needed to know the policies, goals, and objectives of the entire agency, work as a team to possess greater credibility and show administrators the benefits and results of their efforts (Propst & Roggenbuck, 1981). Researchers provided insight regarding when to evaluate, and identified 13 different techniques that could be used to evaluate the effectiveness of interpretive programs and media.

Prospective evaluation techniques include:

peer evaluation, auditing by an expert, review by a panel of outsiders, observing audience attention, observing viewing or listening time, time-lapse photography, behavioral measures of preference, observation of behavior, observation of behavior traces,

self-testing devices, questionnaires, formal interviews, and informal interviews (Propst & Roggenbuck, 1981).

Other methods of evaluation were also considered to be useful tools for measuring effectiveness. In Australia's Department of Natural Resources and Environment, key performance indicators were the criteria used to measure how well Critical Success Factors (CSFs) have been achieved. Evaluation could have been time consuming and costly, so it was important that evaluation efforts concentrate on these CSFs because it was of little value to evaluate factors that are not critical to the organization (Department of Natural Resources and Environment, Victoria, 1999). Performance indicators were also used extensively in the field of education. The current interest in educational indicators developed rapidly in response to pressure from the public to improve the quality of education due to growing concerns about literacy rates, and the ability of U.S. students to compete in a global arena. Indicators (and standards of quality) have been used throughout U.S. history as a way to measure educational effectiveness, but also as a way to document the need for and/or to focus reform within the educational system (Jolly, Hord, & Vaughan, 1990).

Several organizations, such as children's museums and science centers across the U.S., have started to look at personal meaning-making as a way to evaluate the effectiveness of their exhibits. Falk and Dierking (2000) suggested as part of their Contextual Model of Learning that there were eight key factors

fundamental to museum learning: motivation and expectations, prior knowledge, interests and beliefs, choice and control, within-group socio-cultural mediation, facilitated mediation by others, advanced organizers and orientation, design, and reinforcing events and experiences outside of the museum. If these factors were missing, then meaning-making was more difficult. Many techniques have been used to evaluate meaning-making including scientific inquiry with open-ended exhibits, activity cards, personal narratives, behind the scenes profiles, multiple perspectives, and mentoring. The Exploratorium in San Francisco evaluated three exhibits using different video techniques, observation and interviewing to examine the exhibits' ability to produce meaningful experiences for their guests (Gutwill-Wise & Allen, 2002).

In 2004, the NPS started examining a new strategy for their interpretation and education program. They determined that a systematic evaluation process made good sense given the fiscal challenges on the horizon: "Building evaluation capacity service-wide means developing a culture of evaluation...this will require engaging, educating, and seeking input from stakeholders at levels of NPS" (National Park Service, 2006b). The three phase plan allowed time to implement pilot studies, created toolkits for evaluation, identified the best practices, gaps and evaluation needs, assembled a resource library on

evaluation, specified additional competencies for their IDP program, and secured buy-in from all levels of the agency (National Park Service).

Logic Models

Only in recent years have agencies started to produce strategic documents that outlined the scope and intent of interpretive services. Program managers across private and public sectors were asked to describe and evaluate their programs in new ways. If managing agencies continued to invest resources in interpretive services, it must be determined if these services accomplished agency goals (McDonough & Lee, 1990). Decision makers appreciated logical arguments explaining how and why the program addresses specific customer needs, and how measurement and evaluation will assess and improve program effectiveness (McLaughlin & Jordan, 1998). One way to provide this information is to use a logic model. Logic models describe the links among program resources, activities, outputs, customers and both short-term and long-term outcomes (McLaughlin & Jordan). “The benefits of using a logic model tool include:

1. Builds a common understanding of the program and expectations for resources, customers reached and results.

2. Facilitates program design or improvement, identifying projects that are critical to goal attainment, redundant, or have inconsistent or implausible linkages among program elements.
3. Communicates the place of a program in the organization or problem hierarchy, particularly if there are shared logic charts at various management levels; and
4. Points to a balanced set of key performance measurement points and evaluation issues thus improves data collection and usefulness, and meets requirements of Government Performance Results Act (GRPA)" (McLaughlin & Jordan, 1998, p.3).

The NPS was the first land management agency to develop a Comprehensive Program Model or logic model for their Interpretation and Education Division. The model NPS produced reviews the resources, activities, short and long-term outcomes of a broad range of programs, as well as their impact in support of the overall mission of NPS. The National Park Service Interpretation and Education Program Logic Model can be found in Figure 1. This model provided the guidance for future evaluation strategies in NPS (National Park Service, 2006c). The National Park Service was coming up on its centennial. As part of the commemoration the Interpretation and Education

Renaissance Action Plan was created. This plan outlined five pillars of focus for the future. The five pillars are:

1. Engage people to make enduring connections to America's special places.
2. Use new technology.
3. Embrace interpretation and education partners.
4. Develop and implement professional standards.
5. Create a culture of evaluation (National Park Service, 2006a, p.6).

National Park Service Interpretation and Education Program Logic Model **DRAFT v. 2b (10/5/05)**

Premise: If the NPS offers high quality interpretative, curriculum-based, and informational programs to a diverse public, the public will have better quality of life and will be better equipped to help preserve and protect the National Park System for future generations.

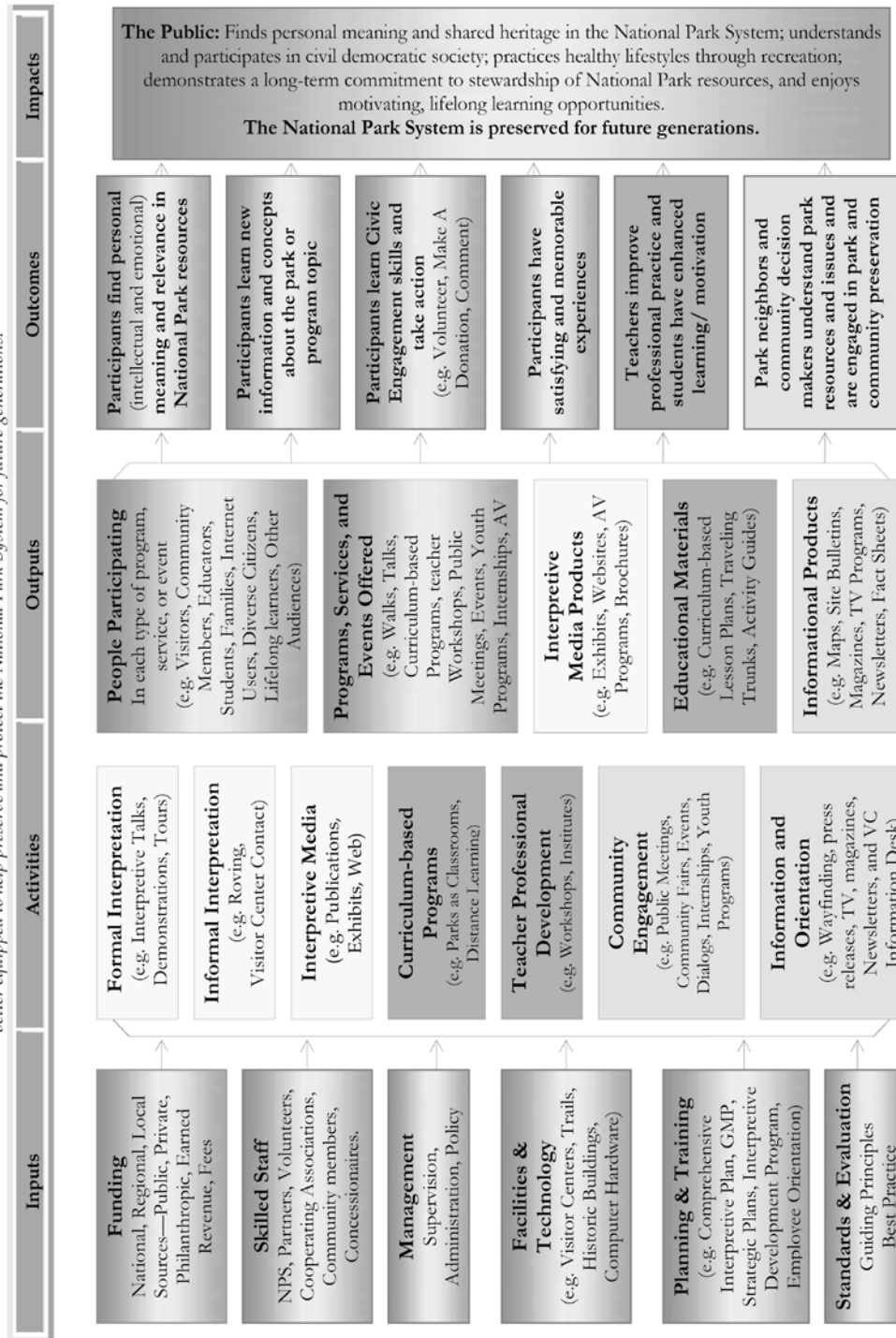


Figure 1. National Park Service Interpretation and Education Program Logic Model (National Park Service, 2006c)

METHODS OF STUDY

This mixed methods study examined the Corps of Engineers ISOP program from the perspective of the rangers in the field. The first phase of the study was a qualitative phase containing a series of interviews with the original developers of the ISOP program and experienced interpreters within the Corps. Analysis of the interviews was accomplished by coding and displaying the data to look for patterns. Phase two built upon the results from the questions asked and analysis accomplished in phase one. A 30-question electronic survey instrument focusing on examining the factors that influence the effectiveness of the ISOP program and the water safety program was created and sent out to park rangers across the Corps who have interpretation listed as part of their job description. The survey responses were numerically coded and analyzed using SPSS Graduate Student Version 20.

Mixed Methods Research

To thoroughly investigate the Corps' ISOP program, a mixed methods research design was used. Qualitative data were collected through the use of interviews and quantitative data was collected through surveys.

Creswell, Clark, & Plano, (2007) defined mixed methods research as a research design with philosophical assumptions as well as methods of inquiry. As a methodology, it involved philosophical assumptions that guide the direction of the collection and analysis of data and the mixture of qualitative and quantitative approaches in many phases in the research process. As a method, it focused on collecting, analyzing and mixing both quantitative and qualitative data in a single study or series of studies. Its central premise was that the use of quantitative and qualitative approaches in combination provides a better understanding of research problems than either approach alone (p. 5).

Interesting and valuable as quantitative measures were, they cannot tell the whole story. Qualitative data were unsurpassed for fleshing out the numbers and providing the human touch that is relevant to the evaluation of interpretation (Beckmann, 1999). A single measurement did not adequately assess the effectiveness of interpretative strategies and multiple measures produced more

insightful results of how best to design, implement and evaluate programs (Ham & Krumpe, 1996).

Data Collection Methods

This mixed methods study examined the ISOP program of the Corps from the perspective of the rangers in the field. This study contained two phases. The first was qualitative and contained a series of interviews with Corps personnel who originally developed the ISOP program and experienced interpreters within the Corps. “The purpose of in-depth interviewing is not to get answers to questions, nor to test hypotheses, and not to “evaluate” as the term is normally used. At the root of in-depth interviewing is an interest in understanding the experience of other people and the meaning they make of that experience” (Seidman, 1998). This qualitative research provided an opportunity to gain understanding and perspectives of the ISOP program from professionals who were the original developers or those in the field who had a decade or more experience. The interviews provided a historical look at the program, and answered the “why” questions that cannot be answered with the literature review.

Researchers can look at the experience of people in an organization through examining many different factors; however to understand the meaning

people make of their experiences, interviewing provides a necessary avenue of inquiry (Seidman, 1998). So many times with federal agencies, the institutional knowledge leaves with each retirement. By conducting interviews, it was the researcher's effort to close the gap on losing the institutional knowledge surrounding the ISOP program. Hopefully this will prevent reinventing the wheel in the future when the ISOP comes up for revisions. The answers from the interview questions were used to help create questions needed in the second phase of research. The second phase was a quantitative phase examining the perceptions of the rangers in the field who use interpretation through the use of a survey instrument. This phase was used to examine the factors that contribute to or constrain the effectiveness of the Corps ISOP and water safety programs.

Strengths, Weaknesses, Opportunities and Threats Analysis

A Strengths, Weakness, Opportunity and Threat (SWOT) analysis is commonly associated with strategic planning within organizations or companies. This methodology stemmed from the need to understand why corporate planning failed. SWOT originated in business management literature and was developed by researchers at Stanford Research Institute (Mishra, Anand & Kodali, 2007). SWOT is an effective method for identifying strengths and weaknesses of an

organization and the opportunities and threats that it may be facing (Hazelbaker, 2006). A goal of using SWOT analysis is to build on strengths, overcome weaknesses, exploit opportunities, and mitigate threats (Mishra et al., 2007). Strengths represent those aspects that are working and can be used as positive building points. Weaknesses are limitations that impede an organization's effective performance and should be looked at as opportunities to improve. Opportunities are a favorable situation where improvements can be made. Identifying threats helps in planning to overcome problems and should be treated as opportunities for change (Hazelbaker, 2006). Adding weighted criteria to each of the categories of the SWOT can increase the validity of analysis (Pearce, 2007). A SWOT analysis was used to identify the strengths, weaknesses, opportunities and threats currently perceived by Corps staff regarding the ISOP program and a subsection of that program in particular, the water safety program.

Phase One

Selection of Candidates for Phase One

Due to the lack of literature exploring the Corps ISOP program, there was a need to gain background information on the program. The most ISOP regulation was written in 1993 by a committee of six Corps employees with a

vested interest in interpretation. Five of the six employees who created the regulation were still employed by the Corps of Engineers at the time of interviews. The sixth recently retired from the agency. The five individuals employed by the Corps were chosen for interviews and were asked additional questions focusing on the history of the regulation. In order to gain a wider perspective of the program, an additional 14 employees were selected for interviews. Figure 3 is a diagram of the Corps divisions as well as a breakdown of the number of interviewees from each division or headquarters. These 14 employees were a mix of from across the country with differing amounts of interpretation occurring within their divisions or districts. Variance in the amount of interpretation at each district may have been due to any number of reasons: the size of the district, the number of projects within the district boundaries, the attitudes of the management toward interpretation, or even the constraints on staffing in a district to name a few. An example of this was a comparison between the Omaha and St. Louis Districts. The Omaha District spans the states of Nebraska, South Dakota, Wyoming, part of North Dakota, Montana, Kansas, Iowa, Minnesota and Colorado but has ten Corps lakes, smaller staffs, a smaller population base to work with, and smaller visitation. St. Louis District covers parts of Missouri and Illinois and has six Corps lakes, larger staffs, a larger population base to work with and heavily visited facilities. Table 2 compared the

different interpretive efforts across the different divisions and districts around the country. Some districts within the Corps have little interpretive efforts and projects because their focus is on other entities such as maintaining a navigation channel in the Great Lakes or Galveston Bay, military construction, or maintaining flood protection in Los Angeles. Those districts with little to no ISOP were highlighted in Table 2 with an asterisk.

The criteria of the candidates selected for the first phase of interviews met the following criteria: (1) individuals who were on the committee to write the most recent regulation on ISOP, or (2) individuals who were currently field level management and working as front line interpreters, district, division or headquarters personnel, and had at least ten years of experience working with interpretation as either a park ranger, district, division, or headquarters personnel in charge of interpretation efforts in their area, or in other capacities within the agency.

Field level management were chosen in some cases because the individuals in those divisions that most qualified for the interviews were located in field offices, not in headquarters, division or district offices. Two personnel from headquarters were also selected for interviews.

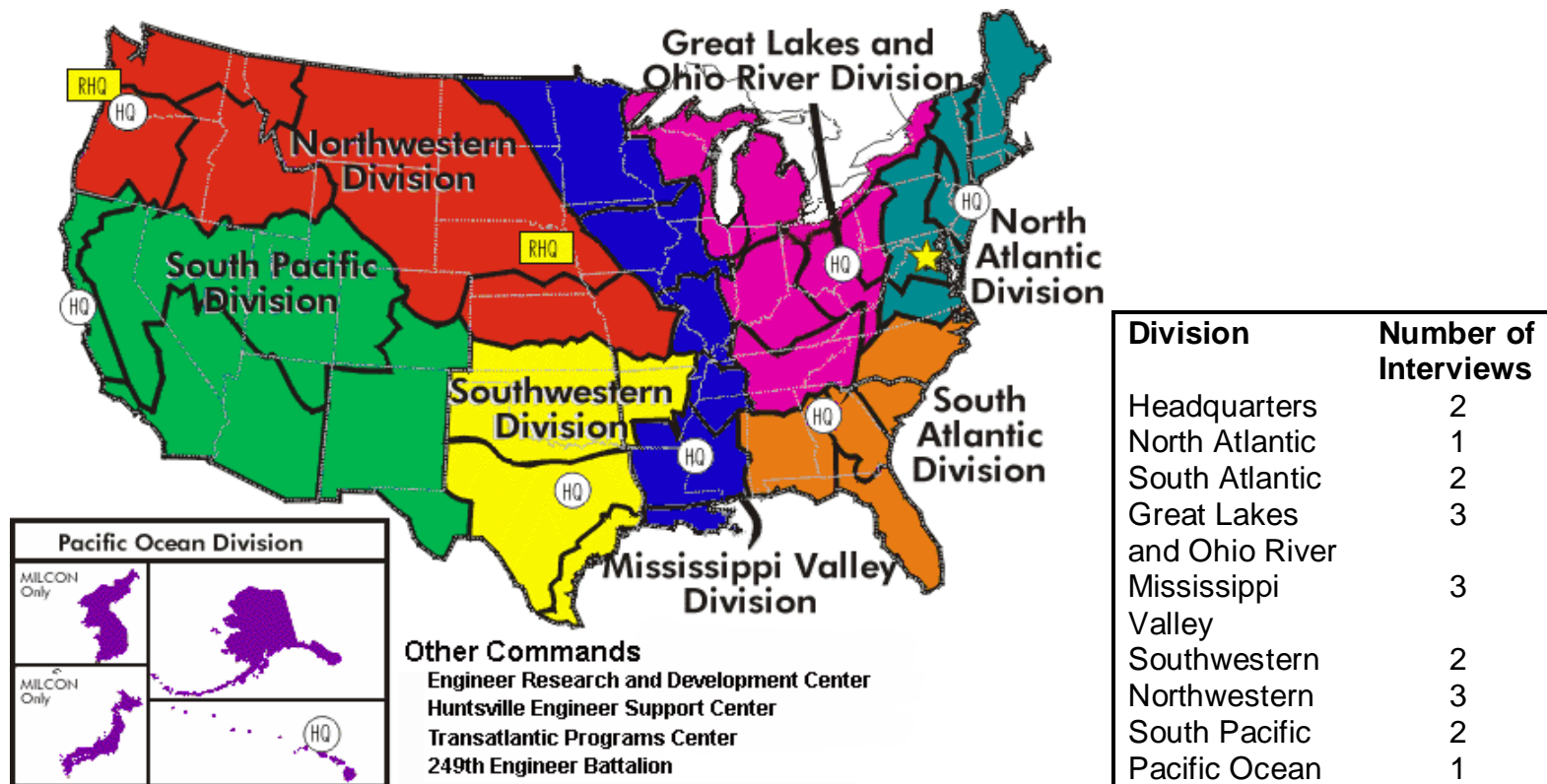


Figure 2. Diagram of Division Offices within the US Army Corps of Engineers and Interviewee Selections by Division (US Army Corps of Engineers, 2007c).

Table 2

Corps Districts Interpretive Contacts, January–December 2012 (U.S. Army Corps of Engineers, 2013 b)

Corps of Engineer Divisions and Districts	Locations reporting Visitor Center Visitation	Visitor Center Visitation	Locations reporting Interpretive Program Numbers	Programs on Corps Mission	Programs on Cultural/ Historical	Environmental Programs	Programs on General Safety	Project Tours	Water Safety Programs
Great Lakes and Ohio River Division	12	306,304	92	114,569	9,970	24,543	3,265	15,717	625,781
<i>Buffalo*</i>	1	6,206	1	11,642	0	0	0	7,715	2411
<i>Detroit*</i>	2	221,185	1	8,075	1393	0	0	0	0
<i>Huntington</i>	4	50,992	40	44,708	2,542	13,921	489	3,666	193,808
<i>Louisville</i>	2	14,237	25	25,705	5,608	2,133	409	1,475	181,722
<i>Nashville</i>	2	11,342	10	3,398	78	3,434	1,508	26	201,065
<i>Pittsburgh</i>	1	2,342	15	21,041	349	5,055	859	2,847	46,785
Mississippi Valley Division	41	630,448	37	106,599	21,625	85,620	8,884	33,118	164,245
<i>New Orleans*</i>	0	0	3	4,322	238	1,794	1,851	356	2,416
<i>Rock Island</i>	5	282,232	5	30,451	7,507	27,770	1,823	7,526	21,532
<i>St. Louis</i>	6	228,691	9	23,570	11,852	43,938	4,423	20,308	44,731
<i>St. Paul</i>	0	0	8	3,205	316	2,210	257	4,831	12,518
<i>Vicksburg</i>	14	119,525	12	45,051	1,712	9,908	530	98	83,048

* Denotes Districts that have very small or no ISOP (US Army Corps of Engineers, 2013 b)

Corps of Engineer Divisions and Districts	Locations reporting Visitor Center Visitation	Visitor Center Visitation	Locations reporting Interpretive Program Numbers	Programs on Corps Mission	Programs on Cultural/ Historical	Environmental Programs	Programs on General Safety	Project Tours	Water Safety Programs
North Atlantic Division	3	179,549	33	12,514	5,116	11,282	3,720	42,618	15,112
<i>Baltimore</i>	0	0	4	1,506	730	3161	115	80	6,863
<i>New England</i>	2	107,700	28	8,516	4,052	5,957	1,265	42,460	6,869
<i>Philadelphia*</i>	1	71,849	1	2,499	334	2,164	2,340	78	1,390
Northwestern Division	22	1,097,439	58	99,706	13,183	68,328	8,891	83,292	173,976
<i>Kansas City</i>	5	106,555	17	14,686	995	2,628	1,250	1,965	80,454
<i>Omaha</i>	6	89,985	13	6,468	898	8,366	565	13,020	8,293
<i>Portland</i>	3	665,308	16	14,585	754	9,086	44	33,066	11,177
<i>Seattle</i>	1	3,507	4	39,591	8,925	15,641	2,032	27,370	32,529
<i>Walla Walla</i>	7	232,084	8	24,376	1,611	32,619	500	7,882	41,523
Pacific Ocean Division	1	71,071	2	629	500	1050	500	223	1,478
<i>Alaska*</i>	0	0	1	1256	0	50	0	23	658
<i>Honolulu*</i>	1	71,071	1	629	500	1,000	500	200	820

Corps of Engineer Divisions and Districts	Locations reporting Visitor Center Visitation	Visitor Center Visitation	Locations reporting Interpretive Program Numbers	Programs on Corps Mission	Programs on Cultural/ Historical	Environmental Programs	Programs on General Safety	Project Tours	Water Safety Programs
<i>Jacksonville</i>	0	0	2	1,133	17	12	0	0	38,775
<i>Mobile</i>	3	16,632	13	8,046	603	3,385	880	707	503,042
<i>Savannah</i>	1	56,499	3	712	0	472	0	957	50,147
<i>Wilmington</i>	0	0	6	4,921	2,535	16,867	4645	5998	41,222
South Pacific Division	4	202,351	19	62,257	11,644	38,592	17,637	13,234	144,744
<i>Albuquerque</i>	3	8,097	6	632	128	15,093	22,817	575	75,069
<i>Los Angeles*</i>	0	0	0	0	0	0	0	0	0
<i>Sacramento</i>	0	0	10	9,582	11,314	13,538	368	177	49,527
<i>San Francisco</i>	1	194,254	3	52,043	202	9,981	14,462	12,482	20,158
Southwestern Division	65	121,581	68	40,349	5,492	9,703	11,389	1,751	680,379
<i>Fort Worth</i>	23	77,890	22	20,691	2,158	3,520	6,767	1,506	288,734
<i>Galveston*</i>	0	0	2	286	100	413	128	5	5,406
<i>Little Rock</i>	2	101,781	19	16,454	2,167	2,283	60	15	56,502
<i>Tulsa</i>	0	0	25	2,918	1,067	3,487	4,434	210	329,737
Total	152	2,740,878	332	452,698	70,685	259,886	75,321	198,266	2,438,940

Interviews for Phase One

Phase one of this study was a qualitative interview process. Phone conversations were recorded with the consent of the interviewee. The audio recordings were used for the exclusive purpose of creating a written transcript of the interview. Confidentiality of the interviewees was of primary importance to the results of the study. It was requested of each interviewee to not discuss the interview or study with anyone to keep contamination of results at a minimum. All interviewees had the same open-ended core questions based on the study's key ideas of interest, however; interviews with those who created the ISOP differed slightly in that additional questions were asked to establish a historical context. Emergent concepts were included when raised. The questions were designed to bring out responses regarding the strengths, weaknesses, opportunities and threats currently perceived by those interviewed on both the ISOP program and the water safety program as well. Questions about the goals of the ISOP were also raised. Those who created the ISOP had additional questions about the history of the ISOP and the development process for the plan. The core questions and follow-up probe questions were as follows.

Interview Protocol

Interviewees were given a brief description of the study at the beginning of the interview. Interviewees were reminded of the critical need to keep confidentiality of each of the interviewers and were asked to not discuss the study with anyone to avoid contamination of the results. The timeframe for the interview was clarified initially to acknowledge the interviewees potential concerns for the time they would need to dedicate to the interview and to confirm that the interview did not need to be rescheduled. From there, the interview started with the following questions:

1. There are six goals to the ISOP Program. Of these goals, which do you think the Corps is currently meeting? Which goals do you think the Corps could improve upon? Which goals do you see opportunities for in the future?

Goal 1: Achieve management objectives using interpretive techniques.

Goal 2: Provide environmental education to foster voluntary stewardship of natural, cultural, and created resources.

Goal 3: Incorporate Corps civil works and military missions and accomplishments into interpretive programming.

Goal 4: Improve visitor and employee safety using interpretive techniques. Use outreach to accomplish ISOP goals, including interpreting Corps missions, promoting stewardship, saving lives, and solving management problems.

Goal 5: The interpretive process should also encourage interest in math and science, including career interest.

Goal 6: Enhance the visitors' experience and enjoyment by anticipating their needs and providing interpretive resources to meet those needs.

2. What do you think are the strengths of the ISOP?
3. What do you think are the weaknesses of the ISOP?
4. What do you see are opportunities for the ISOP in the future?
 - a. Near future (< five years)? Distant future (≥ five years)?
5. What do you see are upcoming threats to the ISOP?
6. What do you think are the strengths of the Corps Water Safety Program?
7. What do you think are the weaknesses of the Corps Water Safety Program?
8. What do you see are opportunities for the Corps Water Safety Program in the future?
 - a. Near future (< five years)? Distant future (≥ five years)?
9. What do you see are upcoming threats to the Corps Water Safety Program?
10. When you look at Figure 2, you see an overview of the National Park Services' Logic Model for their Interpretation and Education mission. There are also columns for where the Corps stands on each action. Do you think this is an accurate portrayal of the Corps ISOP at this point in

time? If not, then what items need to be moved and which columns should they be moved to?

The interview closed with a description of Phase Two of the study describing both the survey instrument and the audience chosen to receive it. Interviewees were asked to name five questions they would use if they were doing the survey. If interviewees had additional questions for the researcher, a discussion on those questions ensued. The interviewee was thanked for their time and participation before ending the call.

The questions were sent out no more than two to three days in advance of the interviews. This gave interviewees time to review the questions and prepare for the interviews. At the end of the interview, the participants were given contact information in case he/she had further comments to make after the interview concluded. A written transcript of the interview with each participant was sent to them for approval and validation after the completion of the interview.

Participants were asked to provide further comments or identify additional questions of interest. Once this process was completed, the audio recordings of the interviews were destroyed.

Data Analysis of Phase One

There were three phases to analyzing data: data reduction, data display and conclusion/verification. Data reduction was the process of sharpening, sorting, focusing and organizing data in a way that conclusions can be made (Miles & Huberman, 1994). After reading through and selecting the topics that were of interest in the interviews, those topics were examined across all interviews. The process of coding facilitated the organization of “chunks” of material into labeled categories that were explored for meaning (Creswell, 2003). Once the data were coded, then patterns were identified and themes were developed from the coding. All displays were designed to help a researcher analyze what was happening so conclusions were drawn, or additional research was accomplished (Miles & Huberman, 1994).

Phase Two

Phase two built upon the results of phase one. This phase used the results from interviews in phase one to create a survey instrument to analyze employee perceptions regarding the Corps’ ISOP Program and Water Safety Program. The survey instrument contained both open and closed ended questions. The survey instrument was pilot tested by a group of six individuals

who had experience in interpretation, and who were either retired from the Corps or left the Corps to pursue a career in another agency. Feedback from the pilot testing was used to finalize the survey instrument before it was sent out to respondent personnel in the field. Both Corps Headquarters and the Engineer Research and Development Center (ERDC), the Corps research division, were notified of the survey. The survey was distributed to Corps park rangers for whom interpretation was listed as a part of their job description. The outcome variable for this phase of the study was the employee perceptions regarding the ISOP.

Selection of Candidates for Phase Two

For the second phase of the study, an electronic survey instrument was delivered by email to park rangers for whom interpretation is part of their job description. Depending on the size of the staff and that field office's relative emphasis on interpretation, eligible staff from each project ranged from one to six individuals. A snowball sample approach was utilized to gather as many rangers in the field that met the criteria as possible. The survey asked if there were other rangers at the facility that should be approached with the survey. If names were given, then those individuals were also sent surveys electronically. This approach generated a broader range of perspectives than would be obtained if the survey

were limited to one person at a particular pay level, or based on time in service. Surveys were administered during the fall of 2009.

Upfront Challenges

One of the most difficult challenges related to this study was identifying study participants for both phases of research. Unlike other federal agencies where a park ranger was defined as a law enforcement officer or an interpreter with 100 percent of their job dedicated to interpretation, in the Corps, the rangers typically had a range of duties assigned to them. Some sites are small enough to only have had one ranger to perform all the duties including visitor assistance, recreation, natural resource management, shoreline permits, and interpretation, to name just a few duties. Other sites have had their staff divided up amongst the different areas and may have had staff specifically assigned to interpretation.

A national database of rangers within the Corps that have had interpretive duties in their job description was not created prior to this study. This database had to be created before the survey instrument of the study could be distributed. The first attempt at creating this list involved contacting all of the district personnel who are in charge of sending information about interpretation out to the field offices. Some of these district personnel provided the main contact person for each project within their districts. Others refused to give out the

information about staff under the auspices of security. A second strategy was to use the Corps Rangernet. A copy of the listserve sent out to anyone who signed up for the Rangernet was used to send an invitational email looking for park rangers with interpretation as part of their job descriptions. A third strategy used to create the database was accomplished by contacting individuals that were personally known within each district, and ask them for a list of interpretive contacts within their district. This strategy proved the most effective. Another strategy that was not used was to send email out to project managers across the Corps asking them to send in the names of their staff. With varying levels of support from Corps management for interpretation, this method was abandoned for other more effective strategies.

Prior to sending out the surveys, contact was made with targeted individuals by email to invite them to participate in the survey and to inform them regarding the survey procedures. The email also asked that if that individual were not the correct person at the project to be taking the survey, that they send an email with the proper contact or contacts for that project. Several individuals made contact this way and helped provide a more accurate list of survey participants. An email notice was sent to the survey participants. This email included a link to the online survey created in Survey Monkey (www.surveymonkey.com). The survey instrument was deployed for a period of

three weeks. During the deployment, email reminders to finish the survey were sent weekly to all participants.

Survey Instrument

The online survey instrument was an extensive set of 30 questions. Fourteen of the questions had multiple questions to answer within them. The survey is included in Appendix E. The survey focused on two main factors (1) examining the factors that influenced the effectiveness of the ISOP program and (2) examining the factors that influenced the effectiveness of the Corps water safety program. Demographic information was gathered in order to examine what participant characteristics, if any, contributed to or constrained the effectiveness of the program. The survey focused on examining participant involvement, management support and perceived benefits of both ISOP and Water Safety programs in relation to the importance, and effectiveness of the ISOP goals listed in the regulation and whether the ISOP program is critical to the natural resource management mission of the Corps.

Research Hypotheses

Data were collected in order to test nine specific hypotheses. An additional eight hypotheses were tested specific to the topic of water safety. These hypotheses tie back to Objective #2 and #3, found in the Introduction on page nine.

H₁: Participants who are more actively involved in the ISOP will perceive the ISOP goals to be more important than those who are not more actively involved in the ISOP.

H₂: Participants who perceive management support for the ISOP will perceive the ISOP goals to be more important than those who do not perceive management support.

H₃: Participants who perceive project benefits from the ISOP will perceive the ISOP goals to be more important than those who do not perceive project benefits from the ISOP.

H₄: Participants who are more actively involved with the ISOP will perceive the goals to be more effective than those who are not more actively involved with the ISOP.

H₅: Participants who perceive management support for the ISOP will perceive the ISOP goals to be more effective than those who do not perceive management support.

H₆: Participants who perceive project benefits to the ISOP will also perceive the ISOP goals to be effective than those who do not perceive project benefits from the ISOP.

H₇: Participants who are more actively involved with the ISOP will perceive ISOP to be critical to the Natural Resource Management

Mission of the Corps of Engineers than those who are not more actively involved in the ISOP.

H₈: Participants who perceive management support for the ISOP will perceive ISOP to be critical to the Natural Resource Management Mission of the Corps of Engineers than those who do not perceive management support.

H₉: Participants who perceive project benefits from the ISOP will also perceive ISOP to be critical to the Natural Resource Management Mission of the Corps of Engineers than those who do not perceive project benefits from the ISOP.

Water Safety Research Hypotheses

Water Safety H₁: Participants who are more actively involved in the water safety program will perceive ISOP Goal 4 to be more important than those who are not more actively involved in the water safety program.

Water Safety H₂: Participants who perceive management support for the water safety program will perceive ISOP Goal 4 to be more important than those who do not perceive management support for the water safety program.

Water Safety H₃: Participants who perceive project benefits from the water safety program will perceive ISOP Goal 4 to be more important than those who do not perceive project benefits from the water safety program.

Water Safety H₄: Participants who are more actively involved in the water safety program will perceive ISOP Goal 4 to be more effective than those who are not more actively involved in the water safety program.

Water Safety H₅: Participants who perceive management support for the water safety program will perceive ISOP Goal 4 to be more

effective than those who do not perceive management support for the water safety program.

Water Safety H₆: Participants who perceive project benefits from the water safety program will perceive ISOP Goal 4 to be more effective than those who do not perceive project benefits from the water safety program.

Water Safety H₇: Participants who are more actively involved with the water safety program will perceive ISOP to be critical to the Natural Resource Management Mission of the Corps of Engineers.

Water Safety H₈: Participants who perceive management support for the water safety program will perceive ISOP to be critical to the Natural Resource Management Mission of the Corps of Engineers.

Data Analysis for Phase Two

A total of 339 surveys were sent out and the response rate was 69.6%. For the 103 surveys that were non-respondents, Great Lakes Division received 25.2% of the surveys but only had only a 19.5% response rate showing a higher non-respondent rate than any other division. There was a higher non-response rate for men than women. Of those sent a survey, 67% were men. Reasons for a lack of response may have been other duties were deemed more important. There were no obvious reasons, such as holidays or field trip season that should have detracted from the survey. Survey responses were numerically coded and entered into a Microsoft Excel spreadsheet database. Data were then imported into SPSS Graduate Student version 20. After data inspection and cleaning, data

were analyzed in order to meet research objectives and answer research questions. A total of 236 respondents attempted the survey; however, there were six cases in which the individual answered four questions or fewer. These six cases were excluded from the results because of the small number of questions answered. The final usable sample size was 230.

Questions from the survey that were qualitative in nature were coded in a similar fashion to Phase One and added into SPSS as well. Proper statistical techniques were used to analyze factors that address the outcome of evaluating the effectiveness of the ISOP program. Descriptive statistics to summarize demographic data. Crosstabulations were used to determine the strength and direction of the relationships. For nominal data, the Cramer's V test, a nominal measure of association, was used. For ordinal variables, Kendall's tau b test was used. For interval data, the Pearson's correlation coefficient was used to determine the strength and direction of the relationship. When variables were considered for inclusion to be grouped together as an independent variable, a reliability analysis, Cronbach's α , was used to determine whether or not the variables were internally consistent enough to be grouped together into one variable.

In the cases of the independent variables of Management ISOP Support, and Perceived Benefits of ISOP, these variables were created from the

combination of several variables after testing their reliability and determining that the variables to be used contained a high reliability for consistency using Cronbach's α . According to Szafran (2012), alpha values of .70 or higher were generally considered adequate in the social sciences. When checking the reliability for consistency on water safety mass marketing techniques, the score was $\alpha=.698$. This score if rounded up would be .70 and was used in the study.

RESULTS

The results of the data analysis were presented in two sections. The first section was from the data collected during Phase I, which were the telephone interviews with Corps of Engineers staff that had a history with the ISOP program. The second section was from the data collected during Phase II, which were surveys sent out to park rangers in the field that have interpretation in their job description. The data analysis for each of the Phases revealed primary factors that influence the ISOP program of the Corps.

Phase I – Interviews with Experienced Corps Interpreters

Data for the phone interviews were collected from nineteen individuals that work for the Corps across the country. Six of the individuals were members of the committee who wrote the most regulation for the ISOP program. The other individuals interviewed came from districts across the country each with differing amounts of interpretation occurring within their districts. All of the interviewees met the criteria listed the Data Collection Methods section of this document.

The data analysis of the Phase I interviews, was divided into three categories. The first section was the results from the SWOT analysis questions. The second was the results from the historical findings about the ISOP program and the third was results from inquiries about the logic model for the National Park Service and where the Corps ISOP program fits into their categories.

History of the ISOP Regulation

In 1993 when the regulation for ISOP came about there was no written history as to why the Corps decided to give validity to the ISOP program by giving it the guidance of a regulation. The interviews proved to be an opportunity to gain some insight into why the Corps decided to make this move in validating and acknowledging the program with guidance.

The initiative for that came from the Corps headquarters staff and the natural resources staff. They were kind of forward looking enough to say, "Okay, we've got a base going and we have things out there probably dating from the 1970's and 1980's and saying we need to formalize this, give it some shape and move it forward." (Interviewee #1)

The committee members picked from across the Corps were all well versed in interpretation either coming in from other agencies or having college backgrounds in interpretation. When asked if they used another agency's interpretative program as a template for creating the ISOP program, one interviewee said:

In my opinion we did not use anyone else's template. What we used was the foundation of the regulations written to that point and I felt like we used basically the professional training of the ones that came together to write that regulation which I believe has influence from other agencies. (Interviewee #1)

The Corps definition of interpretation was created by this committee. The definition seems to narrow the focus to agency accomplishments and missions where other agencies left specifics out. The interviewees were asked why they chose to write the definition in this way.

I wrote down three kind of overall reasons. One is management directives from the Chief of Engineers. Before this point, we could not use the word interpretation or the phrase environmental education. We didn't do that. We did it; we just couldn't call it that. The Chief of Engineers, he'd gone to a meeting where they were talking about trends showing the lack of Americans with good math and science skills for the future and came back concerned that in 15-20 years, which is about now, we'd have trouble recruiting engineers and other science people into the agency. So he wanted to find a way for the Corps to promote math and science in schools. Someone was sharp enough to say, "You know, we already do that. We have park rangers who go into schools and do programs." That was the hook where we could go and reinvent the Interpretive Services and Outreach Program and use the phrase environmental education. The next thing, the reason these six goals were written the way they were is we knew we had to be relevant to the agency. The third one was an improvement over the previous policies because now we could do interpretation, environmental education. (Interviewee #2)

The six goals of the program were also created by the committee that met in 1993. Interviewee #16 was very thorough and specific in the explanation of how the committee determined which goals to include in the ISOP program.

We wanted to be inclusive. I think the management objective was an attempt to address the usefulness of this program, the first goal. The environmental education, fostering stewardship, when I first started with the Corps you couldn't do environmental interpretation. I remember George Tabb was the one really pushing for environmental education. He was saying, "You should do this now" and so we said, "well, okay, then let's include it." The civil works and military missions, I would say if you want the support of the green suits, if we want this program to have their support, this is where we get their buy in by including military missions. Visitor/employee safety – that's kind of a no brainer. Any interpretive program I think can support the agencies' need for promoting safety. And then at the time there was a feeling that recruitment and people in general pursuing careers in math and science and especially minorities pursuing careers in math and science was kind of waning in the US. And the other one is to enhance visitors experience and enjoyment by anticipating their needs. I think that's reasonable because you want to understand why people are coming to your site and provide them with the resources. (Interviewee #16)

The committee overall did not remember a great deal of time being dedicated to formal evaluation. One interviewee commented:

There are evaluation processes. There are manuals that go along with the policy and evaluation procedures. There are sample evaluation sheets for every type of basic interpretive program. In terms of evaluating the national program overall, no that was not considered at the time. The intent was not to put an additional burden for either time or funding on the field, but to provide them the evaluation tools that they could use if desired. (Interviewee #10)

The Corps water safety program is such a huge part of interpretive efforts but it is not exclusively mentioned as a goal. At the time of the committee gathering to create the regulation, water safety was already a common program

park rangers used at their projects. The question posed to the interviewees about this was whether water safety was left out intentionally and what the reason was for not mentioning it specifically in the goal.

It was done intentionally to make the goal broader, because we have many, many safety issues. When you look at some of the examples and the supporting documents, you can see that water safety was a main emphasis area. So it wasn't to exclude it by any means. It was just to broaden, to encompass all components of visitor safety. (Interviewee #10)

The most recent updates to the ISOP program were initiated by the Corps natural resource management headquarters staff. The authors were a specific group of individuals selected by headquarters for their interpretive skills and abilities to collaboratively update the guidance for the ISOP program.

Headquarters staff had some specific goals that were to be included in the plan and also saw it as a great window of opportunity to add specific items such as environmental education to the approved topics for interpretive programs. Water safety was intentionally not mentioned so the goal of visitor safety could be broader but still encompass the water safety program.

Strengths, Weaknesses, Opportunities and Threats (SWOT) Analysis

The SWOT analysis for Phase I looked at three aspects of the Corps ISOP program: the goals of the program, the program as a whole, and the water

safety program of the Corps. Table 3 shows a summary of the findings from the SWOT analysis.

Strengths. The interviewees had a list of strengths for the ISOP program ranging from listing the goals that were successful to different elements within the natural resource management program that go hand in hand with the ISOP program such as regional visitor centers and the Corps volunteer program. The true strengths of the ISOP program were found in the interface of rangers with the public, the Lewis and Clark Bicentennial, and the ongoing water safety program. One commonality from the participants that emerged was the ISOP program was the face of the Corps to the nation. This means that when the average American thought of the US Army Corps of Engineers, they have not seen all the missions of the Corps. What was seen were the employees of the civil works projects, the park rangers.

I think the overall success of our current program is that the program stands as an ambassador of good will. It's through this program that the average tax payer and their children learn about the Corps and the good things that the Corps does. It's through this program that they benefit directly. (Interviewee #12)

The park rangers within the Corps of Engineers have always been the positive face of the Corps. Within the park ranger field, the interpretive rangers are the ones who receive the most face time with the public. When other missions within the Corps get stirred up in the press, the average American who visits their local

Table 3.

Summary of Findings from Interviews on the SWOT Analysis

Strengths	<p>ISOP program is the face of the Corps to the nation</p> <p>Goal 4 strongest and most likely of the six Corps goals to be met within the agency.</p> <p>Lewis and Clark Bicentennial programming efforts</p> <p>The success of the water safety program because of support for the program, supplemental giveaways funded by headquarters, saving lives and having a reduced number of accidents, and the standardization of many things within the program.</p>
Weaknesses	<p>A lack of support for the program</p> <p>No evaluation of the program to measure successes and help give validity to the program</p> <p>A lack of staff to dedicate to ISOP</p> <p>A lack of standardized implementation of the program</p> <p>Lack of visitor contact as more time is now spent in front of a computer.</p>
Opportunities	<p>Selling the ISOP program and its value to our internal audience at all levels from those at the project all the way to headquarters</p> <p>Target the ISOP program as a key communications strategy across the Corps that could help the entire agency improve communications with the public</p> <p>Increase our environmental education programs for children</p> <p>Increase partnerships across the Corps.</p>
Threats	<p>Lack of funding</p> <p>Lack of staff</p> <p>Changes in leadership and priorities</p>

Corps lake, has known what the Corps does to benefit them personally. Even when it comes to other duties park rangers may have had as part of their job description, ISOP helped them accomplish jobs better.

To me even the visitor assistance, where it goes from what's enforced, what's education, what's interpretation, to me probably the better interpreter you are, the better visitor assistance person you are going to be. (Interviewee #1)

While some interviewees struggled with upper level management seeing the benefits of the ISOP, other interviewees found that the ISOP also had a positive image within different branches of their district offices.

I don't think interpretation is always the lowest value. It really depends on the operations manager at the project level. I've seen Chiefs of Operations place it as the highest value in anything we do out there, and I know public affairs people perceive it as the highest value of what we're doing. (Interviewee #11)

There were a couple commonalities found among most of the interviewees when it came to the strengths of the goals within the ISOP program. The majority (14 of 19) of the interviewees found that Goal 4 (Improve visitor and employee safety using interpretive techniques. Use outreach to accomplish ISOP goals, including interpretive Corps missions, promoting stewardship, saving lives, and solving management problems (Corps, 1993, p. 3)) was the strongest and most likely of the six Corps goals to be met within the agency.

I think visitor safety is really the only one that has had the appropriate level of effort. Visitor safety is really the only one that I think we are doing what we should be doing. (Interviewee #6)

Many of the interviewees believed that the Corps was meeting all of the goals to some extent but not exceeding on any of them. Only one individual said the Corps was not meeting any of the goals.

From my perspective, I think the Corps has almost forgotten about this program. There are little pockets of people here and there doing stuff but I think the emphasis on those goals has not been looked at by headquarters for quite some time. (Interviewee #18)

Other strengths mentioned within the ISOP program involved the Lewis and Clark Bicentennial programming efforts. And as Interviewee #14 said, "I think we are blessed with an incredibly talented workforce."

Another commonality that emerged from the participants when it came to strengths within the ISOP program was the success of the water safety program. As one interviewee mentioned about their district,

In our district, it is pretty much one dimensional with water safety comprising most of the effort, you know, probably 98% of the effort. (Interviewee #6)

This was not uncommon throughout the Corps as all but five interviewees mentioned the water safety program as a major strength within the Corps ISOP program. The strengths within the water safety program were many according to the interviewees. Most frequently four were mentioned as reasons why the water safety program was successful: support for the program, supplemental

giveaways funded by headquarters, saving lives and having a reduced number of accidents, and the standardization of many things within the program.

First was overwhelming support for the program. One interviewee said:

The program has definitely grown since the National Operations for Water Safety was established in '95. It consists of a grass roots level team of rangers that represent their divisions. That group develops products and policies and all the other things they do has really led to the success of our national campaign. (Interviewee #11)

They worked on partnerships with other non-profit agencies such as the National Water Safety Council, the Coast Guard and Boat US to create opportunities for better water and boating safety efforts.

Since the Corps involvement with the National Water Safety Congress, we have been put in the lead rather than as just one of the partners. So we have moved up on the scale with the National Water Safety Congress. (Interviewee #13)

They also worked on policy issues and updates and a number of other issues dealing with water safety within the Corps. The water safety program was one of the only programs within the Natural Resource Management section of the Corps to receive its own dedicated personnel and support.

There's no denying that the hard accidents and drowning have gone down as the Corps water safety programs developed and flourished over the years. But I've seen more products become available, more services. And of course, the whole program has been embraced at the highest level and there's a national importance put on it. I see that there's still more opportunities but

we have a first class program now. It shows that with a little support from the top and with the embrace throughout the country, and having it a priority in all the projects, how far it could go. (Interviewee #9)

The next success highlighted by the interviewees was the supplementary educational materials that are supplied to field offices from the National Operations for Water Safety Center.

I've always said the big success of that is the "stuff." Because headquarters subsidizes stuff for the project, managers say, "Oh this must be valuable" and they let their rangers do water safety programs. Having the stuff available, I think, is one reason water safety has been so successful. (Interviewee #3)

The National Operations Center for Water Safety supplied a variety of products each year to help promote water safety to visitors at Corps of Engineer facilities. These products ranged from videos geared towards different age levels from pre-school aged children to teenagers, to water safety coloring books, stickers, tattoos, frisbees, floatable key chains, brochures, posters for bulletin boards, and ruler stickers with water safety messages that are targeted for boaters and anglers so they can measure their fish right on the boat just to name a few. These products were produced annually with overhead funding from the projects to headquarters and then dispersed throughout the Corps by order form. The program was well managed and well funded each year to provide supplemental materials for water safety programs. In 2012, there were over 2.4

million water safety program participants made within the Corps during water safety programs (Table 2, Corps, 2013b).

Another point of strength with the water safety program that was mentioned numerous times were the reduction in water related accidents and fatalities over the years.

Probably the biggest success is that we are using interpretation especially in the water safety area to save lives. (Interviewee #15)

Because improving visitor safety was one of the main goals of the program, many of the interviewees believed this was the greatest success of the program. Because the Corps was the nation's largest supplier of outdoor recreation in the country, in particular for water recreation, water safety was a life or death situation and fatalities were noticed at the highest levels of the Corps. Since the creation of the national water safety office, there has been a decrease in water related accidents and fatalities.

The fourth item mentioned frequently in the strength of the water safety program was the standardization of the water safety program across the Corps. Due to the National Operations for Water Safety office and the water safety committees' work, the supplemental materials, policies and messages sent across the Corps are standardized.

But the water safety program, the way it's been managed basically since the start of time with the Corps, has been nothing but high successes. Because when you hear conversations now versus

thirty years ago, you've got the maintenance team, you have the clerk, you know the administrative support people, you've got engineers, and you've got all the business minds that are focused on that and that's a success story to have all the entities working together for a common goal to save lives and help prevent injuries from all over. So hopefully that network of thirty-five thousand people work for the Corps, because it's been at the Pentagon, it's been at headquarters, it's been down to the districts, the field offices, the division offices. Plus the partnerships that we have with other government and non-government agencies is a high success story. We have seen a significant reduction in fatalities and for me that's a success story at our Corps lakes. You're having everybody get on the same train with the same message and be excited about it and sure about it to reduce any injuries or fatalities. (Interviewee #4)

In performing the SWOT analysis, the strengths that were repeatedly brought into the conversation were the value in interpreters being the "face of the Corps" to the public, the strength of Goal 4 which encompasses visitor safety and water safety, the Lewis and Clark Bicentennial efforts, and the Water Safety program. Within the water safety program, strengths that were mentioned were support for the program, the free marketing materials supplied by headquarters, saving lives and a decrease in the number of water related accidents top the list for strengths in ISOP.

Weaknesses. Numerous weaknesses within the ISOP program were mentioned among the interviewees. The top five factors mentioned were a lack of support for the program, no evaluation of the program to measure successes and

help give validity to the program, a lack of staff to dedicate to ISOP, a lack of standardized implementation of the program and a lack of visitor contact as more time is now spent in front of a computer. If the Corps does not address the weaknesses found above, the ISOP program will continue to see deficiencies.

It all goes back to support and until that message is heard from the upper echelon of decision makers, I think that's just going to be a weakness throughout the whole agency and program. (Interviewee #18)

The weakness mentioned most often by the interviewees was the lack of support from the program from headquarters down to ranger staff at the project level. The comments about lack of support were divided into five categories: (1) general lack of support comments, (2) management does not understand the value in the program and therefore doesn't give ISOP support, (3) ISOP is not a priority, (4) ISOP is not being used as a tool to make it easier to do other aspects of the job, and (5) ISOP no longer has a champion in headquarters to foster support for the program.

I think the weakness (of the ISOP) is implementation and that there has not been a really sufficient budget, sufficient personnel, or even a command emphasis to try to perform these duties the way we do some of our other duties. It seems that visitor centers, visitor information areas, interpretive literature are areas that are underfunded, and under supported and therefore takes a foundation away from the success of the program because those are the tools you need to implement a successful program. (Interviewee #1)

When asked about the weaknesses of the ISOP program overall, 13 out of the 19 interviewees (68.4%) mentioned that a weakness was the lack of support for the ISOP program within the natural resource management community. One interviewee referred to the lack of support from management at all levels as a weakness and also mentioned that the decentralized nature of the Corps showed that some districts supported ISOP while others denigrated it.

So those are the biggest things: manpower, funding, and also some leadership and probably mid-management that are a bit reluctant to support the interpretive services to convey the Corps message.
(Interviewee #3)

Another comment that fell under the lack of support category was a lack of understanding the value of the program. This phrase was used almost as often as a generalized comment about lack of support. Many managers saw this program as optional. This was viewed as a weakness for the program as well.

(talking about ISOP) that it is something that managers have a choice. With interpretive services, you have a choice and a lot of them view it narrowly and say, "Well, it's nature programs. It's programs about this, that and the other. We're too busy, we have these other things." That is a weakness. (Interviewee #7)

I think there is a tremendous lack of understanding of what interpretation can do for management and that has weakened the program considerably. (Interviewee #5)

The agency has placed a priority on items they find that add value to the program. They have also added in the last few years a new budgeting program that incorporated items they find to have value.

I think resources are going to continue to be constrained and programs that are going to continue to succeed are those that can show their value added, how they provide an additional value to the project. That's where I've said if we can succeed in showing the value of interpretation and building stewardship, achieving management objectives, helping bring partners together, etc. then I think it has a very good future. We've got to do a better job of capturing and communicating that value. (Interviewee #10)

Very few ISOP related items had made their way into the new budgeting system, Recreation Budget Evaluation System (RecBEST). According to the Corps of Engineers Natural Resource Management Gateway, "RecBEST is an online tool to assist the Corps in achieving our recreation program objectives and meeting administration goals of measuring performance against strategic objectives, and linking performance to budget" (2013c). Visitor centers were one of the few items that was recorded in RecBEST for ISOP.

It (Visitor centers in RecBEST) hasn't really resulted in huge pots of money back to anyone, but at least somebody at the very highest level, at the chief's level, Chief of Civil Works level, those kind of people who understand the value of interpretation and visitor centers and want to see more done with them and raise the profile of them in the budget process. (Interviewee #2)

Another weakness that the interviewees commented on that fits into the lack of support category was the lack of ISOP being a priority in the natural resources

management community. The natural resource management community has had a multitude of other programs to manage at lake projects ranging from shoreline management programs to recreation programs. The ISOP program had not always made the priority list for some managers.

We still don't have a real structure and standardization. We kind of leave it up to, well, is that a district priority? Or is that just a priority of the local project manager and the rangers who work at that project? So if it were to be made a priority, like water safety and more people would understand how it helps us, I think that would benefit us all. (Interviewee #9)

The ISOP program has long been touted in interpretive circles as a tool to help rangers do their job better. Whether it was used to help with visitor assistance duties, management objectives or to improve communication skills within the Corps as a whole, the ISOP program had not convinced management on the use of the program for the greater good of the Corps. This was a weakness that was made clear by the interviewees.

I think that it is one of those nice things we do and that's kind of what's been seen. One doesn't see the actual tool that it could be. The other thing is that it is not seen as one of our greater missions and even though it shouldn't be a mission in itself, it's a tool that we use to communicate all of our missions and explain our role to the public. We are seen as the nice thing that we add on. Just have a good face to the public, it's not seen as important. (Interviewee #8)

Another interviewee's comments can be added to this in terms of support.

I feel it is important to the agency. Our rangers are the face to the public. And I felt like we missed our mark by not using that

recognized face to the public to deliver our message at a huge interpretive event. The agency needs to realize the value of that customer. So the future of the ISOP program, it's still going to have a few years of struggling. I think it is important and those who are behind it need to do a stronger communication to the leadership of the value of it. Otherwise, I think we are going to lose it.
(Interviewee #14)

In 2006, Mr. George Tabb retired from the position as Chief of the Natural Resource Management section of the Corps in headquarters. Mr. Tabb was one of the proponents of the creation of the latest regulation on ISOP for the Corps. His retirement left a gap in headquarters support for the program that has yet to be filled.

I see a lot of great individual efforts, but I don't see a cohesive agency effort. We need a champion. We don't have one and I don't know that we will. When I look at staffing at headquarters and look at what is on everyone's plate, interpretation doesn't have a priority. There are other things that take precedent that have interpretive ties, but interpretation does not stand on its own at this point.
(Interviewee #5)

Without a champion in headquarters, top down support had been more difficult to come by and management had more leverage for not utilizing the program.

I think it needs to be acknowledged by the top down that it is important that it serves a function and it's not fluff, but then also top down has to do things that show they are supporting it and not just kind of blow it off. (Interviewee #13)

The second weakness that many of the interviewees acknowledged was that a lack of evaluation of the ISOP program left no measures of success to help give validity to the program. This lack of validity added to the lack of support mentioned above.

Where we are falling down is educating management including the green suiters about what interpretation is and how it can work for us. I think when you look at successful programs out there; they are the programs that have evaluations. Then they can go back to management and say, here this is what we've accomplished and this is the kind of feedback we are getting from the public. The evaluations also build up a constituency for you from both sides, both internally and externally. Because we don't do that, we do not have a constituency backing us up. (Interviewee #2)

In days of shrinking budgets, those programs that had shown value added to the agency were programs that were likely to be kept. It had been difficult to show value for a program when there are no evaluation procedures in place to measure outputs of the program.

The best I can say is that obviously evaluation on this program is extremely important. We can't give feedback to our managers unless we are taking a look at it and letting them know the effect. There are managers recognizing the value. It's just that we don't have a consistent viewpoint on that and I think that if we can get the leadership to understand the effect that the outreach does the might put more emphasis into it and get more out of our managers to understand the importance of it. I think we owe it to the public to communicate what it is we do and how we contribute to the value of the nation. (Interviewee #6)

Another weakness to the ISOP program mentioned by the interviewees was a lack of staff to dedicate to interpretation. The rangers of the Corps are a

jack of all trades type of ranger. For many the ISOP program is only one of their many duties. Juggling those duties and adequate time for ISOP can be difficult to do.

We are losing people right and left. Within this district, we took a 20% cut in our ranger staff here a few years ago. Then our next Ops manager came in and did another 20% cut. So you have three park rangers on a 230 mile long lake. People are expected to do more with less. (Interviewee #8)

Another interviewee mentioned this problem as well when it came to staffing levels at the facility in which the interviewee works.

I can see that interpretation has taken a back seat since we've lost so many people. If you have an interpreter that quits a job, they are not replaced as an interpreter. They are replaced as a park ranger or engineer or whatever. (Interviewee #8)

The lack of standardization in the ISOP program came with mixed reactions amongst the interviewees. There were enough interviewees to mention it as a weakness, that it was included.

If we can get this stuff standardized and worked into a project level OMP (Operations Management Plan) so that it becomes a program that has to get reviewed every year and gets annual tasks identified every year. You know, we'd get it worked into what we do on an annual basis. I think there's a lot to be gained and there's a lot to be said for that and help us develop the program. But until we get it embedded into our mission, I think it's just going to develop in bits and pieces here and there across the country, like it is presently. (Interviewee #9)

Many also believed that standardization of the program would weaken it by taking some of the creativity and "out of the box" thinking away.

Decreasing face time with the public had been another weakness mentioned by many of the interviewees. So much of a Corps rangers' time was now spent in front of a computer answering data calls, or responding to emails that the amount of time spent interacting with the public was on the decline.

My biggest concern with all the Corps programs is there seems to be a lack of growth and funding of supporting work in the field. That to me is where those things work is at your visitor contact area. It can't be done by growing a larger computer program or a larger bureaucracy; it's done by putting people out in the field that are having contacts with visitors one on one, I believe. (Interviewee #1)

(I see a weakness as) the over emphasis on media and non-personal services as opposed to personal service type activities, interpretive programs. (Interviewee #11)

The trend is less face to face time and more reliance on your visitor center, your brochures, your websites to tell your story because they don't have the manpower to do the same thing. (Interviewee #9)

One of the interviewees sees the trend going to extremes in places to the detriment of the program overall.

There are places around the country where it's very successful. There are many places where it is successful. There are places where what's being done quite frankly frightens me. Where we have farmed out our interpretive efforts and we are having contractors do it. (Interviewee #7)

Opportunities. The ISOP program of the Corps has had many opportunities for improvement. The top five things that could be improved were

marketing the ISOP program and its value to our internal audience at all levels from those at the project all the way to headquarters, target the ISOP program as a key communications strategy across the Corps that could help the entire agency improve communications with the public, increase our environmental education programs for children, and increase partnerships across the Corps. Implementing these improvements could change the face of the Corps as an agency.

Value to the Corps' internal audience could improve project management support, funding, manpower, and even the optionality of the program. It might help gain a champion as well in HQ.

One of the challenges to selling the ISOP program and its value to our internal customers was the diversity of the organization including a large percentage of staff that came from scientific disciplines where tangible results were the accepted discipline. One interviewee said this about the challenges within the agency:

I think management doesn't understand because we are in an organization with a lot of technical disciplines. This is kind of what I would call a soft learning type of experience that people don't understand especially when you're talking to engineers. You get the blank look on their faces. "What in the heck are you talking about? Go hug a tree?" No, that's not what I am talking about. They don't understand basic communication concepts. They don't understand the fact that people can learn in a fun environment. Where we are falling down is educating management, including the green suiters,

about what interpretation is and how it can work for us. (Interviewee #1)

Targeting the ISOP program as a key communications strategy would help deliver the Corps message to the public through all of the Corps' business lines. Reaching the public with a well-crafted message should help in getting business line managers to understand the importance and support ISOP with funding. In many locations where there were multiple missions, the ISOP program at those projects focuses on all of the missions of the Corps for that facility, regardless of the fact that some of those missions do not help support the program. A prime example of this is at a facility that has a hydropower mission as well as a NRM mission. During tours and in the visitor center, the hydropower mission is interpreted and given at least equal if not more time and focus as other missions of the project. Regulations however state that money that funds hydropower will not be used to pay for any interpretation efforts at the facility. Other business lines though out the Corps could benefit from interpretive services as well. Here is how one interviewee views the potential future of the ISOP program:

There is a communication strategy that is put out by public affairs. It is my understanding that every single project management team or project management plan for various projects regardless of business lines are required to have some kind of communication about what they are doing about their project...

It could be wetland restoration, it could be water flow or a water quality issue, I mean the Corps is involved in so many things where the interpretive program could be linked with what they are

doing and we could support them in that effort by providing professional interpretive perspective on how they reach out to the public. That to me is the future of the program, or could be part of the future of the program.

...Its value not just to the recreation program, but value to other programs and business lines of the Corps. It will only happen if we either get out there and sell ourselves to these people or there is some headquarters mandate or suggested or even funded approach to these other business lines...

I don't know if you have ever seen some of the materials that these people put out? ...Brochures, posters for poster sessions, community scoping materials, some of them are just awful. You know, these people need interpretive training. They need to know how to present themselves to people; they need to know how to give a talk. They need to know how to put some materials together and if they don't know how to do it, or don't want to do it, then they should be able to find us pretty easily so we can help them, and they should pay for our time to do so. (Interviewee #2)

Increasing efforts in environmental education was another area in which the Corps had opportunities for the future. Two of the Corps goals dealt specifically with environmental education and using math and science to recruit youth for future employment. Increasing these efforts, in light of the most recent research coming out about youth and the outdoors was essential. This interviewee spoke of the future of the program and children in the outdoors:

I mention children and the outdoors as an area of emphasis because what they would bring to the table is that of families and children. Unless they change the current demographic trends of recreating and outdoors, we won't have any clientele in ten years. Because it's rapidly declining, so we should look upon that as a priority interpretive message just from the standpoint that our

product is not being used the way it has been in the past.
(Interviewee #12)

Another interviewee put it this way:

I think you know our society has changed, our demographics have changed, our culture has changed, our views of outdoor areas have changed. There's some real strong evidence to suggest that people aren't going outdoors as much as they use to. I think there's some real opportunities for the interpretive services program to meet some of those challenges and be relevant in that regard.
(Interviewee #2)

Due to decreased budgets, many of the interviewees believed the future of the ISOP program lies in the hands of increases partnership opportunities. Other federal agencies have had partnerships and corporate sponsors for years; the Corps has been slower to develop those kinds of partnerships.

Partnering, if for programs that we don't have the time, the resources, including human resources. Opportunities in which we can partner whether it be other government agencies at federal, state and local levels, established youth organizations, the public school systems. Just across the board, I think we have a great opportunity because everyone is limited in more restrictive resources and we need to pool to share and get out the same message. So overall, I think partnering is a huge opportunity that we need to take advantage of. (Interviewee #12)

Threats. Threats to the ISOP program all funneled down to three major factors: lack of funding, lack of staff, and changes in leadership and priorities. The lack of funding for ISOP throughout the Corps was one of the most frequent comments made during the interviews. Several of the interviewees when asked if

there were any threats to the ISOP program, gave one word answers, "Budget."

Budget cuts tend to have a trickle-down effect.

Somebody's going to talk about budget cuts, and with budget cuts comes a much more acute prioritization of missions. I think budget cuts and on the national level what the leadership is looking at, and I am just really afraid that a lot of our interpretive program is going to go by the wayside with diminishing dollars and staff. (Interviewee #12)

Budgets in the Natural Resource Management section of the Corps have seen flat or declining budgets over the last decade. One reason for the decline in budgets over the last several years had been that the Corps is a military agency. The United States has been at war; therefore, portions of Department of Army budgets that used to be allocated to natural resource management had been set aside to support the war efforts in Iraq and Afghanistan. One interviewee worded it this way:

Well first is the continuing budget cuts. We're losing people; we're losing resources, because our budget's getting cut pretty badly. I wrote down here, militarization of the Corps. It seems to be there is a movement that they're trying to reintegrate the Corps with the regular Army, maybe because of the war so that's getting a lot more emphasis. I think a lot of the traditions on the natural resources side are being pushed aside. (Interviewee #5)

The second biggest threat mentioned by the interviewees was the lack of staffing at projects across the country. Staffing levels tend to correlate with budgets. In many parts of the country when a park ranger retires, that position

remains unfilled because the salary of the retired employee was needed for other pressing priorities, like keeping parks open.

Manpower has never had adequate levels for interpretive services and inconsistent from district to district. It is largely determined by the priorities of individual project managers and when they are making decisions on whether or not to close recreation areas, all programs including interpretation are going to be severely cut back. (Interviewee #16)

Another common practice with the lack of staff is to go to contracting.

Contracting of interpretation within the Corps has been a controversial topic for years. In reference to the ISOP program, here is what one interviewee had to say about contracting within the Corps:

There are places where what's being done quite frankly frightens me. Where we have farmed out our interpretive efforts and we are having contractors do it. That to me is just absurd. It's just shooting ourselves in the foot as an agency to have someone else representing us. And I would like to see an evaluation done of comparing the effectiveness of interpretation done by Corps Rangers versus interpretation done by contract employees. I would submit that interpretation done by professional Corps rangers is going to be a whole lot better than the so called interpretation that's being done by contract employees. I've been to several Corps facilities that have contractors working for them and I don't see the professionalism. I don't see the interpretive ability. Whatever is causing that, I'm not convinced that we can get contractors to represent ourselves and it doesn't save us money as we know. Contractors don't normally save us money. And we certainly don't serve our purposes and I think that if serious evaluation was done along those lines it would be real obvious that we are shooting ourselves in the foot. (Interviewee #7)

In a military based agency, a change of command in leadership occurred every several years. With this change in command, there can be a change in priorities as to what leadership within the Corps wants to focus on. This shift in priorities that can happen with the change in leadership can have a direct impact on the ISOP program.

Changing leadership with different priorities. Right now we have a leader in headquarters that is gung-ho about water safety. Now he's wanting mandatory life jackets at lakes and everything, but the next person that comes in could say, "You know, I really don't care about the water safety program." It trickles down from headquarters to division to district to local. If you have someone higher up saying this is important, the people below them continue to say it is important and put money down in effort. But if you have someone high up who has another priority and agenda that could detract from our program. (Interviewee #9)

Several other threats to the program were mentioned by individual interviewees. All of these threats seem to be valid to the ISOP program and should be mentioned as possible threats even though they may not have been mentioned a majority of times.

Two threats that surfaced were discussed under weaknesses too. The threats are (1) the lack of a champion in headquarters who provides a necessary level of support for the program starting at the top so the trickle-down effect takes place and (2) other than a policy statement with some support manuals, ISOP is not a cohesive program with adequate standardization. By not having a cohesive

program, it allows for management to be flexible with the amount of interpretation done at their projects.

I think the fact that we don't have a cohesive program and we don't have a champion is a tremendous threat. (Interviewee #5)

One interviewee mentioned a threat about the water safety program.

I think that nationwide we have seen an over emphasis on water safety, at the expense of some of the other goals I've been talking about. (Interviewee #6)

The backlog of maintenance at some Corps projects was overwhelming.

Corps parks have gotten older and less money has been made available to manage the aging infrastructure. Many parks have had to close facilities just because the maintenance backlog has become a safety issue in those areas and funds have not been allocated for necessary repairs.

I'm a little concerned that the lack of backlog maintenance. I'm just afraid that people will say it's not worth it or it's just too much; we can't do it. That is a little bit worrisome to me. So these problems don't go away they just become more expensive to fix and that's a problem. Another one is the continued apathy by a lot of people within the agency about the program. You're not going to save something you don't care about. (Interviewee #2)

Working for the Department of Army at some of the largest dams in the country, the need for increased security after September 11, 2001 has become a threat to the ISOP program. Many facilities closed their doors to the public that day and have yet to re-open them to the public. Given that one of the goals of the program was to incorporate Corps civil works and military missions and

accomplishments into interpretive programming, closing the doors and keeping the public out shut down a large section of ISOP for some projects.

Security, the increase on security I view as a threat to the interpretive program because a lot of managers, whether justifiably or not, are using security as an excuse to cut out powerhouse programs and things like that. Whether or not that is really justified requirement or not, I don't know. (Interviewee #7)

National Park Service Logic Model with Corps Comparisons

The interviewees were given the NPS Logic model and were asked to evaluate which stage of development the interviewees believed the Corps programs may fall within. The stages of development were (1) Consistent throughout the agency, (2) Established by not consistent, (3) Incipient and (4) Not developed. There were a couple items that received little attention by interviewees. Most thought “information,” “orientation,” “informational products” and “participants learn new information and concepts about the park or program topic” were consistent throughout the agency. Many interviewees commented about the lack of anything consistent within the agency but the elements listed above are the most consistent items within the ISOP program.

Most of the interviewees believed that all categories should be categorized as established by not consistent except standards. For curriculum based programs found in the activities section, here's what one interviewee had to say:

There are also some curriculum based programs that are out there and that are in use, like Project WET and Project WILD. I don't believe that the programs have to originate in the Corps, although we developed some products back in '96. There are many wonderful programs out there like Project WET and Project WILD that are curriculum based and that we have Corps Employees participating in and promoting. (Interviewee # 10)

Several interviewees also believed that Teacher Professional Development should be considered as Established, but not Consistent. An interviewee commented about Teacher Professional Development by saying:

I know that on my staff right now, [employee name], yesterday went to a meeting where they're doing a three day workshop for teachers to educate teachers about what dams are all about and what goes on here. The different issues like salmon and so on ... but I would say it's either established not consistent or incipient. (Interviewee # 7)

Under the section titled Outcomes, many of the interviewees believed all the outcomes should be listed as at least established but not consistent throughout the Corps and some thought the outcomes were consistent throughout the agency. For the outcome of "participants find personal meaning and relevance in natural, cultural and created resources," some believed it should be listed under established but not consistent, while others said it should only be incipient. Several said the elements of "teachers improve professional practice" and "students have enhanced learning/motivation" should be established but not consistent.

We get 300-400 school groups through here a year. I don't think the teachers would keep coming if they weren't getting anything worthwhile. We do have teachers that participate every year, we get anywhere from a dozen to two dozen teachers that go through our teacher workshop. In addition to teacher workshops, we have two facilitators here that teach teachers to become Project Learning Tree facilitators and I think we have one that teaches Project Wet also. (Interviewee # 7)

Under the Impacts section, several of the interviewees thought “the Corps’ natural, cultural, and created resources are conserved for future generations” should be considered established but not consistent throughout the Corps.

Under Inputs, many said that “training” should be either consistent throughout the Corps or established but not consistent.

I think the training/PROSPECT course has been around for quite a long time and has improved over time and that is very consistent. However there might be some individual training efforts that are very established in some districts and not so much in others, so I would stick that in there. (Interviewee #2)

Under the category Activities, “community engagement” received a great deal of comments and all who commented said it should be established but not consistent.

There were several comments under the Outputs section about “educational materials” and many of those interviewed thought that it should be considered as established, but not consistent. One interviewee said:

I think some places are developing educational materials, particularly if they have a big education program. (Interviewee #11)

The category Outcomes received the most comments of any categories. Interviewees agreed that all outcomes listed should fall in the category of established but not consistent or consistent throughout the agency. For Participants have satisfying and memorable experiences, one interviewee mentioned the Corps comment card program.

I just finished doing an analysis of customer comments... It included two years of visitor center responses and their thoughts on the exhibits...Folks responding on the comment cards will generally tell you that they are having satisfying and memorable experiences. (Interviewee # 10)

Throughout the entire NPS logic model, interviewees concluded that very few of the elements were in a lower stage of development than “established but not consistent” through the Corps.

Phase II – Survey of Field Personnel

Demographics

Of the 339 surveys sent out, there were 236 surveys that were either completed or partially completed resulting in a response rate of 69.6%. Of the 236 surveys attempted, there were six cases in which the individual answered four questions or fewer of the 30 questions asked. These six datasets were excluded from the results because the small number of questions answered did not provide enough data about the participants. The survey did not target a

specific GS level, but grades ranged from a GS-03 to a GS-12, with 88% (n=169) indicating they were at a GS-09 level or higher. The most prominent GS level represented was a GS-09 at 59.3% (n=114).

More men than women completed the survey, with approximately 59% (n=111) claiming to be male and 41% (n=77) claiming to be female. Participants in the survey ranged from less than a year of full time work for the Corps to thirty three years of experience with a mean of 15.4 years and a standard deviation of 8.955.

Participants were asked to indicate the district in which they were working (n=231). To narrow results, districts were grouped into their perspective divisions. Just over 23% of all survey participants were from Mississippi Valley Division. Other divisions were represented as follows, in descending order: Great Lakes & Ohio River Division (19.5%), Northwestern Division (18.3%), South Atlantic Division (12.9%), North Atlantic and Southwestern Division (12.4% respectively), South Pacific Division (5.4%), and Pacific Ocean Division (.8%).

Supervisory Status

Participants were also asked about their supervisory status. Table 4, shows that only 30.1% (n=58) of participants had supervisory status, that is, supervising one or more employees. The majority of participants at 69.9% (n=135) claimed to not

be a supervisor. Among those supervising at least one employee, about half supervised between two and five individuals.

Table 4

Frequency of Participants with Supervisory Duties

Number of Employees Supervised	Frequency	Percent	Cumulative Percent
Not a supervisor	135	69.9	69.9
1 employee	2	1.0	71.0
Between 2-5 employees	29	15.0	86.0
Between 6-10 employees	40	9.3	95.3
More than 10 employees	<u>43</u>	<u>4.7</u>	<u>100.0</u>
Total	519	100.0	

Work Time Dedicated to Interpretation

The participants were asked how many hours per week are spent working with the ISOP. Table 5 shows that answers varied from less than five hours per week to between 30-40 hours per week. Slightly over 45% of participants claimed to spend less than five hours a week working on the ISOP. This was also the mode. The median was 5-9 hours per week. When asked if participants were to increase interpretive efforts by 10%; what other aspects of their job might be sacrificed, the majority of responses were summed into three categories: administration work/data calls would be late; visitor assistance duties would be

less; and contract administration for recreational facilities would not get accomplished. Many stated increased interpretive efforts would be beneficial.

“I do not think that any other aspect of my job would be sacrificed. When I feel that I am making a difference in the life and attitude of our public through interpretive services, then I feel good about myself and my job. It’s a win, win situation. As park rangers or natural resource specialists, we are the first contact most of the public has with USACE. More interpretive efforts to increase the public’s awareness of the Corps’ work and land stewardship is necessary in telling the Corps’ story and “putting our best foot forward.” (Survey Participant #24)

Table 5

Hours per Week Spent on ISOP

Hours per week on ISOP	Frequency	Percent	Cumulative Percent
Less than 5 hours	104	45.2	45.2
5-9 hours	47	20.4	65.7
10-19 hours	36	15.7	81.3
20-29 hours	17	7.4	88.7
30-40 hours	25	10.9	99.6
Missing	<u>1</u>	<u>0.4</u>	<u>100.0</u>
Total	230	100.0	

Interpretive Specialist

The researcher asked, “If your project has one or more designated interpretive specialists are you that person?” Crosstabulation was used on the variables of “are you the project interpretive specialist” and gender. Results found in Table 6 shows that 63.7% of the participants were their project’s interpretive

specialist and the majority (74.2%) were female. Cramer's V was also used in this crosstabulation and showed a moderate positive relationship ($V=.234$, $p=.009$) between being a project's interpretive specialist and gender. With this level of significance, the results showed that women are more likely to be the project's interpretive specialist.

Table 6

Relationship Between Gender and the Project Interpretive Specialist

			Gender		Total
			Male	Female	
Project Interpretive Specialist	No	Count	28	17	45
		% within Gender	48.3%	25.8%	36.3%
	Yes	Count	30	49	79
		% within Gender	51.7%	74.2%	63.7%
	Total	Count	58	66	124
		% within Gender	100.0%	100.0%	100.0%

Planning

Participants were asked about a variety of different types of planning documents they may or may not have at their project. It was not uncommon for projects to have more than one of these different kinds of planning documents. The most common planning document that projects had was an Operations Management Plan (OMP) with an interpretive chapter (76.7%). Other planning

documents such as Interpretive Master Plans (35.3%), Interpretive Prospectus (32.4%), and Comprehensive Interpretive Plans (31.1%) were less commonly used. Another tool the Corps had that can help with planning and interpretive efforts is the Corps Natural Resource Management Gateway. The Gateway was designed as a clearinghouse for the natural resource management program. Participants were asked about the frequency in which they used the Gateway for sharing interpretive program ideas. Table 7 shows the results of this question with only 1.4% use it regularly. The modal answer was seldom (39.7%) suggesting that although the Gateway was designed as a clearinghouse, participants are not using it for that purpose and additional questioning may be necessary to learn why the Gateway is not being used as the tool in which it was designed.

Table 7

Use of the Gateway for Sharing Interpretive Ideas

Use of Gateway	Frequency	Percent	Cumulative Percent
Never	48	21.9	21.9
Seldom	87	39.7	61.6
Occasionally	66	30.1	91.8
Frequently	15	6.8	98.6
Regularly	<u>3</u>	<u>1.4</u>	<u>100.0</u>
Total	219	100.0	

Training

Participants were asked what training they had completed in interpretation. Nearly three quarters (73%) of participants stated that they have taken the Corps PROSPECT course titled Interpretive Services. Other training received by the participants was Corps project, district or division training (77%), university coursework (45.4%), and NAI training and workshops (38.8%). Out of the 73% of participants that have had the PROSPECT course, 32% had it over 10 years ago.

Regulations

The Corps had two complementary regulations on the ISOP program, an engineering pamphlet (EP) and an engineering regulation (ER). Participants were asked, “Have you read the current regulations on the ISOP program and if so, how long has it been?” Table 8 shows that over 30% of participants have not read either of the regulations covering the ISOP program. The median response was more than five years. The result suggested that interpreters within the Corps do not keep the regulations that oversee their program fresh in their minds and 30% have not read the goals of the program and the job they are tasked with performing.

Table 8

Frequencies in Reading Corps ISOP Regulations

Time since reading COE regulations	EP Freq.	ER Freq.	EP Percent	ER Percent	EP Cumulative Percent	ER Cumulative Percent
I've never read it	67	60	32.8	30.9	32.8	30.9
More than 5 years	52	51	25.5	26.3	58.3	57.2
Between 1 and 5 years	62	55	30.4	28.4	88.7	85.6
6 months to 1 year	14	16	6.9	8.2	95.6	93.8
Within the last 6 months	<u>9</u>	<u>12</u>	<u>4.4</u>	<u>6.2</u>	<u>100.0</u>	<u>100.0</u>
Total	204	194	100.0	100.0		

ISOP Goals are Important

The first three main hypotheses were analyzed looking at the dependent variable of "ISOP goals are important" (mean 3.7 on 5-point scale) and the independent variables of "participant ISOP involvement" (mean 1.2 on 5-point scale), "management ISOP support" (mean 3.2 on 5-point scale), and "perceived

benefits of the ISOP program” (mean 3.7 on 5-point scale). In the assessment of “ISOP goals are important,” the 5-point scale consisted of 1 = Very Unimportant, 2 = Unimportant, 3 = Neither Unimportant nor Important, 4 = Important, and 5 = Very Important. In the assessment of “participant ISOP involvement,” the 5-point scale consisted of 1 = less than 5 hours per week, 2 = 5-9 hours per week, 3 = 10-19 hours per week, 4 = 20-29 hours per week and 5 = 30-40 hours per week. In the assessment of both “management ISOP support” and “perceived benefits of the ISOP program,” the 5-point scale consisted of 1 = strongly disagree, 2 = disagree, 3 = neither disagree nor agree, 4 = agree, and 5 = strongly agree.

There were six goals within the ISOP program of the Corps. The following question was asked in the survey instrument: “The Corps developed six goals of the Interpretive Services and Outreach Program. Please indicate the level of Importance you attach to each of these goals for your district/project level.” The participant rated each goal from very unimportant to very important. The participant answered these six separate questions, one for each goal. Table 9 ranks the perceived importance of each goal by mean score. A new variable called “ISOP goals are important” was created by taking the scores for each goal and combining them to form a computed mean for the goals as a whole. This new variable with the computed mean from combining the means of all six goals was used to analyze the following hypotheses:

Table 9

Perceived Importance of ISOP Goals

ISOP Goals	Mean Perceived Importance on a 5-point Scale
Goal 6 – (Enhance visitor experience) Enhance the visitors' experience and enjoyment by anticipating their needs and providing interpretive resources to meet those needs.	4.35
Goal 2 – (Environmental education) Provide environmental education to foster voluntary stewardship of natural, cultural, and created resources.	4.42
Goal 4 – (Water Safety) Improve visitor and employee safety using interpretive techniques. Use outreach to accomplish ISOP goals, including interpreting Corps missions, promoting stewardship, saving lives, and solving management problems.	4.42
Goal 1 – (Management objectives) Achieve management objectives using interpretive techniques.	3.99
Goal 3 – (Civil works and military missions) Incorporate Corps civil works and military missions and accomplishments into interpretive programming.	3.76
Goal 5 – (Recruitment & STEM) The interpretive process should also encourage interest in math and science, including career interest.	3.71

Note. Mean based on a scale where 1 is very unimportant and 5 is very important.

H₁: Participants who are more actively involved in the ISOP will perceive the ISOP goals to be more important than those who are not more actively involved in the ISOP.

H₂: Participants who perceive management support for the ISOP will perceive the ISOP goals to be more important than those who do not perceive management support.

H₃: Participants who perceive project benefits from the ISOP will perceive the ISOP goals to be more important than those who do not perceive project benefits from the ISOP.

Each of the independent variables had several questions in the survey instrument that were analyzed to provide a more thorough investigation of each independent variable category.

Participant ISOP Involvement

H₁: Participants who are more actively involved in the ISOP will perceive the ISOP goals to be more important than those who are not more actively involved in the ISOP.

To test H₁, crosstabs were performed on the dependent variable “ISOP goals are important” by the independent variable of “participant ISOP involvement.” The variable used for determining participant ISOP involvement was “how many hours per week are spent doing interpretive work.” Kendall’s tau-b was used in this crosstab and shows a weak, positive significant relationship (tau-b=.118, p=.050, n=204) between the hours per week spent doing interpretive work and the importance of the ISOP goals. Results are significance at the .05

level and therefore show that participants who are more actively involved in the ISOP will perceive the ISOP goals to be more important. These results are consistent with the research hypothesis. Table 10 shows the crosstabulation results.

Table 10

Crosstabulation of ISOP Goal Importance and Hours per Week Spent on ISOP

		Hours per Week Spent on ISOP						Total
		< 5	5-9	10-19	20-29	30-40	> One	
		hours	hours	hours	hours	hours	Answer	
Very Unimportant	Count	2	0	3	0	1	0	6
	%	2.2	0.0	8.8	0.0	4.3	0.0	2.9
Unimportant	Count	3	1	0	0	0	1	5
	%	3.2	2.6	0.0	0.0	0.0	100.0	2.5
Neither Important nor Unimportant	Count	25	9	5	0	2	0	41
	%	26.9	23.1	14.7	0.0	8.7	0.0	20.1
Important	Count	57	26	24	13	18	0	138
	%	61.3	66.7	70.6	92.9	78.3	0.0	67.6
Very Important	Count	6	3	2	1	2	0	14
	%	6.5	7.7	5.9	7.1	8.7	0.0	6.9
Total	Count	93	39	34	14	23	1	204
	%	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Other variables were considered for inclusion, but ultimately not used in the independent variable of “participant ISOP involvement.” These factors were a reverse coding of the factor “I do not enjoy the interpretive part of my job” evaluating the enjoyment of ISOP in the participant’s job, “finding value in learning and applying interpretive skills in the participant’s job,” and “interpretive skills help the participant to manage other programs for which they are responsible.” Reliability analysis revealed that these variables were not internally consistent enough to be grouped together and analyzed as such (Cronbach’s $\alpha=.59$). Individually, however; all but “enjoyment in the interpretive part of the job” showed similar results as “hours per week spent working on ISOP” with weak positive significant relationships at a .05 significance level between the variables and the importance of ISOP goals.

Management ISOP Support

H₂: Participants who perceive management support for the ISOP will perceive the ISOP goals to be more important than those who do not perceive management support.

To test H₂, crosstabs were performed on the dependent variable “ISOP goals are important” by the independent variable of “management ISOP support.” “Management ISOP support” was created by taking the scores of each of the following variables: “district management supports ISOP as a management tool,”

"project management supports ISOP as a management tool," "project management supports ISOP through the allocation of staff time," and "project management supports ISOP through the allocation of funding" and combining them to form a computed mean for "Management ISOP support." Reliability analysis on these four variables revealed a high reliability for consistency (Cronbach's $\alpha=.864$). The computed mean variable of management support had a Pearson's r of .091 and no significance ($p=.201$). The only individual variable that showed a level of significance was project management supports ISOP as a management tool ($\text{tau-b}=.145$, $p=.030$, $n=197$). Based on the lack of significant findings, it was determined that perceived management support had no effect on whether participants perceived the goals to be important. Therefore, the results were not consistent with the research hypothesis.

Another variable considered for inclusion and not used in the independent variable of "management ISOP support" was "when funding is limited, to what extent are the interpretive services affected." A list of 11 common interpretive services was identified for participants to review. Reliability analysis revealed that these variables were internally consistent enough to be grouped together and analyzed (Cronbach's $\alpha=.807$). Crosstabulations were run on each individual service. All crosstabulations revealed relationships of no significance ($p>.050$) with the exception of conducting campfire programs (Somer's $d = .197$, $p=.019$).

Perceived Benefits of ISOP

H₃: Participants who perceive project benefits from the ISOP will perceive the ISOP goals to be more important than those who do not perceive project benefits from the ISOP.

To test H₃, crosstabs was performed on the dependent variable “ISOP goals are important” by the independent variable of “perceived benefits of the ISOP program.” The variables used for determining perceived benefits of the ISOP program were “ISOP benefits the project by communicating with the public about project missions,” “ISOP benefits the project by interpreting the natural, built, and environmental features of the project,” “ISOP benefits the project by using interpretation to help increase compliance with rules and regulations,” “ISOP improves the Corps image and community relations in the area,” “ISOP positively affects peoples’ lives and well being at the project,” and “ISOP provides opportunities for visitors to connect with the meanings of the resources.” Reliability analysis on these variables revealed a high reliability for consistency (Cronbach’s $\alpha=.834$).

Pearson’s r-value ($r=.210$, $p=.003$, $n=198$) indicated a moderate, positive relationship between the computed mean for “ISOP goal importance” and the computed mean for “perceived benefits of the ISOP program.” These results are

consistent with the research hypothesis. Table 11 shows the crosstabulation results.

Table 11

Crosstabulation of ISOP Goal Importance and ISOP Benefits

		ISOP Benefits					Total
		Strongly Disagree	Disagree	Neither disagree nor agree	Agree	Strongly Agree	
Very Unimportant	Count	1	0	2	2	1	6
	%	100.0	0.0	2.7	1.9	6.3	3.0
Unimportant	Count	0	0	1	4	0	5
	%	0.0	0.0	1.4	3.8	0.0	2.5
Neither important nor unimportant	Count	0	1	23	15	0	39
	%	0.0	50.0	31.1	14.3	0.0	19.7
Important	Count	0	1	44	77	12	134
	%	0.0	50.0	59.5	73.3	75.0	67.7
Very Important	Count	0	0	4	7	3	14
	%	0.0	0.0	5.4	6.7	18.8	7.1
Total	Count	1	2	74	105	16	198
	%	100.0	100.0	100.0	100.0	100.0	100.0

ISOP Goals are Effective

The next three main hypotheses were analyzed looking at the dependent variable of “ISOP goals are effective” (mean 3.2 on 5-point scale) and the independent variables of “participant ISOP involvement” (mean 1.2 on 5-point scale), “management ISOP support” (mean 3.2 on 5-point scale), and “perceived benefits of the ISOP program” (mean 3.7 on 5-point scale). In the assessment of “ISOP goals are effective,” the 5-point scale consisted of 1 = completely ineffective, 2 = ineffective, 3 = neither ineffective nor effective, 4 = effective, and 5 = very effective. In the assessment of “participant ISOP involvement,” the 5-point scale consisted of 1 = less than 5 hours per week, 2 = 5-9 hours per week, 3 = 10-19 hours per week, 4 = 20-29 hours per week and 5 = 30-40 hours per week. In the assessment of both “management ISOP support” and “perceived benefits of the ISOP program,” the 5-point scale consisted of 1 = strongly disagree, 2 = disagree, 3 = neither disagree nor agree, 4 = agree, and 5 = strongly agree. The following question was asked in the survey instrument: “The Corps developed six goals of the Interpretive Services and Outreach Program. Please indicate how effective you think the Corps has been at achieving each goal at your district/project level.” The participant rated each goal from completely ineffective to very effective. The participant answered these six separate questions, one for each goal. Table 12 ranks the perceived

Table 12

Perceived Effectiveness of ISOP Goals

ISOP Goals	Mean Perceived Effectiveness on a 5-point Scale
Goal 4 – (Water safety) Improve visitor and employee safety using interpretive techniques. Use outreach to accomplish ISOP goals, including interpreting Corps missions, promoting stewardship, saving lives, and solving management problems.	4.05
Goal 6 – (Enhance visitor experience) Enhance the visitors' experience and enjoyment by anticipating their needs and providing interpretive resources to meet those needs.	3.85
Goal 2 – (Environmental education) Provide environmental education to foster voluntary stewardship of natural, cultural, and created resources.	3.80
Goal 1 – (Management objectives) Achieve management objectives using interpretive techniques.	3.47
Goal 3 – (Civil works and military missions) Incorporate Corps civil works and military missions and accomplishments into interpretive programming.	3.30
Goal 5 – (Recruitment and STEM) The interpretive process should also encourage interest in math and science, including career interest.	3.12

Note. Mean based on a scale where 1 is completely ineffective and 5 is very effective.

effectiveness of each goal by mean score. A new variable called “ISOP goals are effective” was created by taking the scores for each goal and combining them to form a computed mean for the goals as a whole. This new variable with the computed mean from combining the six goals was used to analyze the following hypotheses:

H₄: Participants who are more actively involved with the ISOP will perceive the goals to be more effective than those who are not more actively involved with the ISOP.

H₅: Participants who perceive management support for the ISOP will perceive the ISOP goals to be more effective than those who do not perceive management support.

H₆: Participants who perceive project benefits to the ISOP will also perceive the ISOP goals to be effective than those who do not perceive project benefits from the ISOP.

Participant ISOP Involvement

H₄: Participants who are more actively involved with the ISOP will perceive the goals to be more effective than those who are not more actively involved with the ISOP.

To test H₄, crosstabs was performed on the dependent variable “ISOP goals are effective” by the independent variable of “participant ISOP involvement.” The variable used for determining participant ISOP involvement was “how many hours per week are spent doing interpretive work.” Kendall’s tau-b values indicated a weak, positive significant relationship (Tau-b=.129, p=.036, n=201) between the hours per week spent doing interpretive work and the

effectiveness of the ISOP goals. As the number of hours spent working on interpretation increased so did the perception of the effectiveness of the ISOP goals. These results were consistent with the research hypothesis. Table 13 showed the crosstabulation results.

Table 13

ISOP Goal Effectiveness & Hours per Week Spent on ISOP

		Hours per week spent on ISOP						Total
		< 5 hours	5-9 hours	10-19 hours	20-29 hours	30-40 hours	> one answer	
Completely Ineffective	Count	7	0	0	0	0	0	7
	%	7.5	0.0	0.0	0.0	0.0	0.0	3.5
Somewhat Ineffective	Count	15	3	5	2	4	0	29
	%	16.1	7.9	15.6	14.3	17.4	0.0	14.4
Neither Ineffective nor Effective	Count	40	19	14	3	9	0	85
	%	43.0	50.0	43.8	21.4	39.1	0.0	42.3
Somewhat Effective	Count	27	15	11	8	9	1	71
	%	29.0	39.5	34.4	57.1	39.1	100.0	35.3
Very Effective	Count	4	1	2	1	1	0	9
	%	4.3	2.6	6.3	7.1	4.3	0.0	4.5
Total	Count	93	38	32	14	23	1	201
	%	100.0	100.0	100.0	100.0	100.0	100.0	100.0

One other variable was considered for inclusion with the independent variable of “participant ISOP involvement.” That variable was a computed mean of nine different interpretive products ranging from programs to visitor center exhibits to look at the frequency of evaluation. Pearson’s r-value ($r=.246$, $p=.001$, $n=194$) indicates a moderate, positive relationship between the frequency of evaluations on interpretive products and the effectiveness of the ISOP goals. These results are also consistent with the research hypothesis.

Management ISOP Support

H₅: Participants who perceive management support for the ISOP will perceive the ISOP goals to be more effective than those who do not perceive management support.

To test H₅, crosstabs was performed on the dependent variable “ISOP goals are effective” by the independent variable of “management ISOP support”. “Management ISOP support” was a created variable using a computed mean from the means of the following other variables: “district management supports ISOP as a management tool,” “project management supports ISOP as a management tool,” “project management supports ISOP through the allocation of staff time,” and “project management supports ISOP through the allocation of funding.” Reliability analysis on these four variables revealed a high reliability for consistency (Cronbach’s $\alpha=.864$). This was also analyzed along with each

individual variable. Table 14 illustrates the relationships of each individual variable of management support.

Table 14

<i>Management ISOP Support and ISOP Goal Effectiveness</i>				
Management ISOP Support	Kendall's tau-b	Asymp. Std. Error ^a	Approx. T ^b	Approx. Sig.
DISTRICT Management Supports ISOP as a Management Tool	.328	.059	5.448	.000
PROJECT Management Supports ISOP as a Management Tool	.357	.057	6.059	.000
PROJECT Management Supports ISOP through the allocation of staff time	.307	.060	4.997	.000
PROJECT Management Supports ISOP through the allocation of funding	.252	.060	4.131	.000

There were 195 valid responses except for in the first variable that contained 196 valid responses. As shown in Table 15, Kendall's tau-b values indicated a moderate, positive significant relationship for each management ISOP support variable. The created variable of Management ISOP Support indicated a strong, positive relationship ($r=.431$, $p=.000$, $n=195$). These results

were consistent with the research hypothesis that participants who perceive management support for the ISOP will perceive the goals to be more effective.

Table 15 showed the crosstabulation results.

Table 15

Crosstabulation for ISOP Effectiveness & Management Support

		Level of Management Support					Total
		Strongly Disagree	Disagree	Neither disagree nor agree	Agree	Strongly Agree	
Completely Ineffective	Count	4	0	3	0	0	7
	%	33.3	0.0	3.4	0.0	0.0	3.6
Somewhat Ineffective	Count	1	9	14	5	0	29
	%	8.3	47.4	16.1	6.8	0.0	14.8
Neither Ineffective nor Effective	Count	6	9	39	27	0	81
	%	50.0	47.4	44.8	37.0	0.0	41.3
Somewhat Effective	Count	0	1	29	37	4	71
	%	0.0	5.3	33.3	50.7	80.0	36.2
Very Effective	Count	1	0	2	4	1	8
	%	8.3	0.0	2.3	5.5	20.0	4.1
Total	Count	12	19	87	73	5	196
	%	100.0	100.0	100.0	100.0	100.0	100.0

Perceived Benefits of ISOP

H₆: Participants who perceive project benefits to the ISOP will also perceive the ISOP goals to be effective than those who do not perceive project benefits from the ISOP.

To test H₆, a crosstabs was performed on the dependent variable “ISOP goals are effective” by the independent variable of “perceived benefits of the ISOP program.” The variables used for determining perceived benefits of the ISOP program were “ISOP benefits the project by communicating with the public about project missions,” “ISOP benefits the project by interpreting the natural, built, and environmental features of the project,” “ISOP benefits the project by using interpretation to help increase compliance with rules and regulations,” “ISOP improves the Corps image and community relations in the area,” “ISOP positively affects peoples’ lives and well being at the project,” and “ISOP provides opportunities for visitors to connect with the meanings of the resources.” Reliability analysis on these variables revealed a high reliability for consistency (Cronbach’s $\alpha=.834$).

Pearson’s r-value indicated a moderate, positive relationship between ISOP goal effectiveness and perceived benefits of ISOP ($r=.322$, $p=.000$, $n=198$). These results were consistent with the research hypothesis that participants who perceive project benefits from the ISOP will also perceive the ISOP goals to be more effective. Table 16 showed the crosstabulation results.

Table 16

Crosstabulation ISOP Goal Effectiveness and ISOP Benefits

		ISOP Benefits					Total
		Strongly Disagree	Disagree	Neither disagree nor agree	Agree	Strongly Agree	
Completely Ineffective	Count	0	0	4	3	0	7
	%	0.0	0.0	5.5	2.9	0.0	3.6
Somewhat Ineffective	Count	0	1	16	11	1	29
	%	0.0	50.0	21.9	10.6	6.3	14.8
Neither Ineffective nor Effective	Count	0	1	41	38	1	81
	%	0.0	50.0	56.2	36.5	6.3	41.3
Somewhat Effective	Count	0	0	10	50	11	71
	%	0.0	0.0	13.7	48.1	68.8	36.2
Very Effective	Count	1	0	2	2	3	8
	%	100.0	0.0	2.7	1.9	18.8	4.1
Total	Count	1	2	73	104	16	196
	%	100.0	100.0	100.0	100.0	100.0	100.0

Importance Versus Performance (Effectiveness)

Another analysis that was performed during the data analysis phase was an importance-performance analysis introduced by Martilla and James (1977). Mean importance and mean effectiveness ratings were calculated for each of the six ISOP goals. In this analysis, goal “effectiveness” is taken to be a measure of goal “performance.” The position where the horizontal (i.e. goal performance) and vertical (i.e. goal importance) axes crossed was determined by calculating the mean for goal importance overall and the mean for goal performance overall and adding them together and dividing by two. The individual means for each of the goals were plotted onto a grid using x,y coordinates for item mean importance and item mean performance. Plotting the goals individually facilitated an analysis of each individual goal. For goals perceived higher in importance and performance, these goals can be classified as “keep up the good work.” For goals that were perceived as being important but where performance was not rated as highly, these goals should receive more time and energy in the future and thus were classified under the heading “concentrate here.” Goals that were perceived as less important but whose performance levels were high, may be receiving too much attention within the Corps. These goals would be classified under the heading “possible overkill.” Finally, goals that were perceived as less

important, but where performance was also rated lower should probably be given a lower priority in terms of future focus; hence classification under the heading “low priority.”

Figure 3 shows the results of this analysis for all the ISOP goals. Goal 4 was perceived as high in importance and performance. Interpreters should “keep up the good work” with Goal 4, the water safety goal. Goal 6, enhancing the visitor experience by meeting visitor needs, sat on the line between “keep up the good work” and “possible overkill.” Goal 1, achieving management objectives, and Goal 2, providing environmental education, were perceived as high in performance but lower in importance. These two goals were found in the quadrant of “possible overkill”. Goal 3, incorporating the civil works and military missions, and Goal 5, recruitment in math and science, were considered lower in both importance and effectiveness and should be given a lower priority.

ISOP is Critical to the NRM Program

The next three main hypotheses were analyzed looking at the dependent variable of “ISOP is critical to the natural resources program of the Corps” (mean 4.15 on 5-point scale) and the independent variables of “participant ISOP involvement” (mean 1.2 on 5-point scale), “management ISOP support” (mean 3.2 on 5-point scale), and “perceived benefits of the ISOP program” (mean 3.7 on



Figure 3. ISOP Goal Importance versus Goal Performance (Effectiveness)

5-point scale). In the assessment of “participant ISOP involvement,” the 5-point scale consisted of 1 = less than 5 hours per week, 2 = 5-9 hours per week, 3 = 10-19 hours per week, 4 = 20-29 hours per week and 5 = 30-40 hours per week. In the assessment of “ISOP is critical to the NRM program,” “management ISOP support” and “perceived benefits of the ISOP program,” the 5-point scale

consisted of 1 = strongly disagree, 2 = disagree, 3 = neither disagree nor agree, 4 = agree, and 5 = strongly agree. The following hypotheses were examined.

H₇: Participants who are more actively involved with the ISOP will perceive ISOP to be critical to the Natural Resource Management Mission of the Corps of Engineers.

H₈: Participants who perceive management support for the ISOP will perceive ISOP to be critical to the Natural Resource Management Mission of the Corps of Engineers.

H₉: Participants who perceive project benefits from the ISOP will also perceive ISOP to be critical to the Natural Resource Management Mission of the Corps of Engineers.

Participant ISOP Involvement

H₇: Participants who are more actively involved with the ISOP will perceive ISOP to be critical to the Natural Resource Management Mission of the Corps of Engineers.

To test H₇, crosstabs were performed on the dependent variable "ISOP is critical to the NRM program of the Corps" by the independent variable of "participant ISOP involvement." The variable used for determining "participant ISOP involvement" was "how many hours per week are spent doing interpretive work."

Kendall's tau-b values indicated a weak, positive relationship (tau-b = .185, p = .002, n = 196) between the hours per week spent doing interpretive work and perception that ISOP is critical to the NRM program of the Corps.

These results were consistent with the research hypothesis that participants who are more actively involved in the ISOP will perceive the ISOP to be critical to the NRM program of the Corps. Table 17 shows the crosstabulation results.

Table 17

ISOP is Critical to NRM Program of Corps & Hours per Week Spent on ISOP

		Hours per week spent on ISOP						Total
		< 5 hours	5-9 hours	10-19 hours	20-29 hours	30-40 hours	> one answer	
Strongly disagree	Count	1	1	1	0	0	0	3
	%	1.1	2.7	3.0	0.0	0.0	0.0	1.5
Disagree	Count	2	0	1	0	0	0	3
	%	2.2	0.0	3.0	0.0	0.0	0.0	1.5
Neither disagree nor agree	Count	12	3	2	1	2	0	20
	%	13.2	8.1	6.1	7.1	10.0	0.0	10.2
Agree	Count	55	22	12	6	9	1	105
	%	60.4	59.5	36.4	42.9	45.0	100.0	53.6
Strongly agree	Count	21	11	17	7	9	0	65
	%	23.1	29.7	51.5	50.0	45.0	0.0	33.2
Total	Count	91	37	33	14	20	1	196
	%	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Other variables were considered for inclusion in the independent variable of “participant ISOP involvement.” These factors were a reverse coding of the factor “I do not enjoy the interpretive part of my job” to look at “enjoyment of ISOP in the participant’s job,” “finding value in learning and applying interpretive skills in the participant’s job,” and “interpretive skills help the participant to manage other programs for which they are responsible.” Reliability analysis revealed that these variables were not internally consistent enough to be grouped together and analyzed as such (Cronbach’s $\alpha=.59$). Individually however, all showed moderate to strong positive relationships between the variables and ISOP is critical to the NRM program at a significant level ($p\leq .01$). These results were also consistent with the research hypothesis. Table 18 shows the results from those analyses.

Management ISOP Support

H₈: Participants who perceive management support for the ISOP will perceive ISOP to be critical to the Natural Resource Management Mission of the Corps of Engineers.

To test H₈, crosstabs were performed on the dependent variable “ISOP is critical to the NRM program of the Corps” by the independent variable of “management ISOP support.” Management ISOP support was a created variable using a computed mean from the means of the following other variables: “district

Table 18

Other Variables Considered in Participant ISOP Involvement

	Kendall's tau-b	Asymp. Std. Error ^a	Approx. T ^b	Approx. Sig.
Enjoyment in the interpretive part of the job	.406	.057	6.916	.000
Value in learning and applying interpretive skills to my job	.456	.058	7.270	.000
ISOP skills help me manage other programs	.283	.063	4.338	.000

management supports ISOP as a management tool,” “project management supports ISOP as a management tool,” “project management supports ISOP through the allocation of staff time,” and “project management supports ISOP through the allocation of funding.” Reliability analysis on these four variables revealed a high reliability for consistency (Cronbach’s $\alpha=.864$). The created variable and each of the individual variables were all analyzed. No variables showed any relationship of significance ($p>.05$). These results were not consistent with the research hypothesis that participants who perceive

management support for the ISOP will perceive the ISOP to be critical to the NRM program of the Corps.

Perceived Benefits of ISOP

H₉: Participants who perceive project benefits from the ISOP will also perceive ISOP to be critical to the Natural Resource Management Mission of the Corps of Engineers.

To test H₉, crosstabs were performed on the dependent variable “ISOP is critical to the NRM program of the Corps” by the independent variable of “perceived benefits of the ISOP program.” The variables used for determining “perceived benefits of the ISOP program” were “ISOP benefits the project by communicating with the public about project missions,” “ISOP benefits the project by interpreting the natural, built, and environmental features of the project,” “ISOP benefits the project by using interpretation to help increase compliance with rules and regulations,” “ISOP improves the Corps image and community relations in the area,” “ISOP positively affects peoples’ lives and well being at the project,” and “ISOP provides opportunities for visitors to connect with the meanings of the resources.” Reliability analysis on these variables revealed a high reliability for consistency (Cronbach’s $\alpha=.834$). Research showed a moderate positive relationship ($\tau\text{-}b=.369$, $p=.000$, $n=196$). These results are consistent with the research hypothesis that participants who perceive

management support for the ISOP will perceive the ISOP to be critical to the NRM program of the Corps. Table 19 shows the results of the crosstabulation.

Table 19

ISOP Critical to NRM Program of Corps and ISOP Benefits

		ISOP Benefits					Total
		Strongly Disagree	Disagree	Neither disagree nor agree	Agree	Strongly Agree	
Strongly disagree	Count	1	1	1	0	0	3
	%	100.0	50.0	1.4	0.0	0.0	1.5
Disagree	Count	0	0	3	0	0	3
	%	0.0	0.0	4.2	0.0	0.0	1.5
Neither disagree nor agree	Count	0	0	16	4	0	20
	%	0.0	0.0	22.2	3.8	0.0	10.2
Agree	Count	0	1	38	61	5	105
	%	0.0	50.0	52.8	58.1	31.3	53.6
Strongly agree	Count	0	0	14	40	11	65
	%	0.0	0.0	19.4	38.1	68.8	33.2
Total	Count	1	2	72	105	16	196
	%	100.0	100.0	100.0	100.0	100.0	100.0

ISOP Goal 4 (Water Safety) is Important

The first three water safety hypotheses were analyzed looking at the dependent variable of “ISOP Goal 4 (water safety) is important” (mean 4.4 on 5-point scale) and the independent variables of “participant ISOP involvement” (mean 2.9 on 5-point scale), “perceived management support” (mean 3.2 on 5-point scale), and “perceived benefits from the water safety program” (mean 3.7 on 5-point scale).). In the assessment of “ISOP Goal 4 is important,” the 5-point scale consisted of 1 = Very Unimportant, 2 = Unimportant, 3 = Neither Unimportant nor Important, 4 = Important, and 5 = Very Important. In the assessment of “participant ISOP involvement,” the 5-point scale consisted of 1 = 20% or less, 2 = 21-40%, 3 = 31-60%, 4 = 61-80% and 5 = 81-100%. In the assessment of “perceived management support,” the 5-point scale consisted of 1 = not affected at all, 2 = affected a little, 3 = moderately affected, 4 = quite affected, 5 = completely affected (eliminated). In the assessment of “perceived benefits of the ISOP program,” the 5-point scale consisted of 1 = strongly disagree, 2 = disagree, 3 = neither disagree nor agree, 4 = agree, and 5 = strongly agree.

Water Safety H₁: Participants who are more actively involved in the water safety program will perceive the ISOP Goal 4 to be more important.

Water Safety H₂: Participants who perceive management support for the water safety program will perceive ISOP Goal 4 to be more important.

Water Safety H₃: Participants who perceive benefits from the water safety program will also perceive ISOP Goal 4 to be more important.

Participant Water Safety Involvement

Water Safety H₁: Participants who are more actively involved in the water safety program will perceive the ISOP Goal 4 to be more important.

To test Water Safety H₁, crosstabs were performed on the dependent variable “ISOP Goal 4 is important” by the independent variable of “participant ISOP involvement.” The variable used for determining participant ISOP involvement was “ISOP time dedicated to water safety efforts.” The relationship was not significant (Tau-b = .058, p = .330, n = 198). These results were not consistent with the research hypothesis that participants who are more actively involved in the water safety program will perceive ISOP Goal 4 to be more important.

One of the questions focusing on water safety in the survey instrument asked the following question: How often do you use the following methods of water safety promotion at your site? The methods ranged from water safety programs to a variety of marketing techniques such as water safety products or billboards. Fifteen different methods were listed. These methods were then

broken down into two categories and a calculated mean was developed for each of the categories. The first category was water safety programs. The second category was water safety mass marketing techniques. Reliability analysis revealed that the methods listed for water safety programs were internally consistent enough to be grouped together and analyzed as such (Cronbach's $\alpha=.80$).

Reliability analysis on water safety mass marketing techniques was borderline consistent enough to be grouped together and analyzed (Cronbach's $\alpha=.698$). These two variables as calculated means were analyzed. A third variable measuring the frequency of evaluation of water safety programs was also independently analyzed. None of the three relationships were significant. These results were also not consistent with the research hypothesis.

Management Water Safety Support

Water Safety H₂: Participants who perceive management support for the water safety program perceive the ISOP Goal 4 to be more important. To test Water Safety H₂, crosstabs were performed on the dependent variable "ISOP Goal 4 is important" by the independent variable of "management water safety support." The variable used for determining management water safety support was "when funding is limited, how are conducting water safety outreach affected?" The relationship was not significant (Tau b=.040, p=.635,

n=96). This result was not consistent with the research hypothesis that states participants who perceive management support for the water safety program perceive the ISOP Goal 4 to be more important.

Perceived Benefits of Water Safety

Water Safety H₃: Participants who perceive benefits from the water safety program will also perceive ISOP Goal 4 to be more important.

To test Water Safety H₃, crosstabs were performed on the dependent variable "ISOP Goal 4 is important" by the independent variable of "perceived benefits of water safety." A computed mean was created using data from the following variables: "ISOP benefits the project by communicating with the public about project missions," "ISOP benefits the project by interpreting the natural, built, and environmental features of the project," "ISOP benefits the project by using interpretation to help increase compliance with rules and regulations," "ISOP improves the Corps image and community relations in the area," "ISOP positively affects peoples' lives and well being at the project," and "ISOP provides opportunities for visitors to connect with the meanings of the resources." Kendall's tau-b shows a moderate positive relationship (Tau-b=.221, p=.001, n=198). These results are consistent with the research hypothesis that states that participants who perceive benefits from the water safety program will also

perceive ISOP Goal 4 to be more important. Table 20 shows the results of the crosstabulation.

Table 20

Importance of ISOP Goal 4 – Water Safety and ISOP Benefits

		ISOP Benefits					Total
		Strongly Disagree	Disagree	Neither disagree nor agree	Agree	Strongly Agree	
Very Unimportant	Count	1	0	2	3	1	7
	%	100.0	0.0	2.7	2.9	6.3	3.5
Unimportant	Count	0	0	0	1	0	1
	%	0.0	0.0	0.0	1.0	0.0	0.5
Neither Important nor unimportant	Count	0	0	6	2	0	8
	%	0.0	0.0	8.1	1.9	0.0	4.0
Important	Count	0	1	32	33	1	67
	%	0.0	50.0	43.2	31.4	6.3	33.8
Very Important	Count	0	1	34	66	14	115
	%	0.0	50.0	45.9	62.9	87.5	58.1
Total	Count	1	2	74	105	16	198
	%	100.0	100.0	100.0	100.0	100.0	100.0

ISOP Goal 4 (Water Safety) is Effective

The next three water safety hypotheses were analyzed looking at the dependent variable of “ISOP Goal 4 (water safety) is effective” (mean 4.1 on 5-point scale) and the independent variables of “participant ISOP involvement” (mean 2.9 on 5-point scale), “perceived management support” (mean 3.2 on 5-point scale), and “perceived benefits from the water safety program” (mean 3.7 on 5-point scale). In the assessment of “ISOP Goal 4 is effective,” the 5-point scale consisted of 1 = completely ineffective, 2 = ineffective, 3 = Neither ineffective nor effective, 4 = effective, and 5 = very effective. In the assessment of “participant ISOP involvement,” the 5-point scale consisted of 1 = 20% or less, 2 = 21-40%, 3 = 31-60%, 4 = 61-80% and 5 = 81-100%. In the assessment of “perceived management support,” the 5-point scale consisted of 1 = not affected at all, 2 = affected a little, 3 = moderately affected, 4 = quite affected, 5 = completely affected (eliminated). In the assessment of “perceived benefits of the ISOP program,” the 5-point scale consisted of 1 = strongly disagree, 2 = disagree, 3 = neither disagree nor agree, 4 = agree, and 5 = strongly agree.

Water Safety H₄: Participants who are more actively involved with the water safety program will perceive ISOP Goal 4 to be more effective.

Water Safety H₅: Participants who perceive management support for the water safety program will perceive ISOP Goal 4 to be more effective.

Water Safety H₆: Participants who perceive benefits to the water safety program will also perceive ISOP Goal 4 to be effective.

Participant Water Safety Involvement

Water Safety H₄: Participants who are more actively involved with the water safety program will perceive ISOP Goal 4 to be more effective.

To test Water Safety H₄, crosstabs were performed on the dependent variable “ISOP Goal 4 is effective” by the independent variable of “participant ISOP involvement.” The variable used for determining “participant ISOP involvement” was “ISOP time dedicated to water safety efforts.” The relationship is not significant (Tau-b=.017, p=.763, n=193). This result is not consistent with the research hypothesis that participants who are more actively involved in the water safety will perceive ISOP Goal 4 to be more effective if it was the only variable assessed.

Three other variables were assessed to determine participant water safety involvement. As mentioned earlier in the section reviewing Water Safety H₂, one of the survey questions involving 15 different water safety methods was broken down into two categories and then a calculated mean was developed for each of the two categories: water safety programs and water safety mass marketing techniques. Again, reliability analysis revealed that the methods listed for water

safety programs were internally consistent enough to be grouped together and analyzed as such (Cronbach's $\alpha=.80$). Reliability analysis on water safety mass marketing techniques was borderline consistent enough to be grouped together and analyzed (Cronbach's $\alpha=.698$). The third variable measuring the frequency of evaluation of water safety programs was also independently analyzed. The results of these analyses can be found in Table 21.

Table 21

Other Variables Considered in Participant Water Safety Involvement

	Kendall's tau-b	Asymp. Std. Error ^a	Approx. T ^b	Approx. Sig.
Calculated Mean of the frequency of Water Safety Programs	.166	.066	2.519	.012
Calculated mean of frequency of water safety mass marketing techniques	.125	.063	1.979	.048
Frequency of evaluation of water safety programs	.263	.060	4.317	.000

There were 193 valid responses for the first two variables and 186 valid responses for the third variable. The first two variables showed a weak positive

relationship while the third showed a moderate positive relationship. The first two relationships showed significance at the .05 level ($p=.012$ and $p=.048$ respectively). The third relationship showed significance at the .01 level ($p=.000$). For all three variables, as the participant involvement in water safety increases, the perception is that ISOP Goal 4 is more effective. These results are consistent with the research hypothesis that states participants who are more actively involved in the water safety program will perceive ISOP Goal 4 to be more effective.

Management Water Safety Support

Water Safety H₅: Participants who perceive management support for the water safety program will perceive ISOP Goal 4 to be more effective.

To test Water Safety H₅, crosstabs were performed on the dependent variable "ISOP Goal 4 is effective" by the independent variable of "management water safety support." The variable used for determining management water safety support was "when funding is limited, how are conducting water safety outreach affected?" There was no significant relationship (Tau-b= $-.084$, $p=.274$, $n=93$). This result is not consistent with the research hypothesis that states participants who perceive management support for the water safety program perceive the ISOP Goal 4 to be more effective.

Perceived Benefits of Water Safety

Water Safety H₆: Participants who perceive benefits to the water safety program will also perceive ISOP Goal 4 to be effective.

To test Water Safety H₆, crosstabs were performed on the dependent variable “ISOP Goal 4 is effective” by the independent variable of “perceived benefits of water safety.” A computed mean was created using data from the following variables: “ISOP benefits the project by communicating with the public about project missions,” “ISOP benefits the project by interpreting the natural, built, and environmental features of the project,” “ISOP benefits the project by using interpretation to help increase compliance with rules and regulations,” “ISOP improves the Corps image and community relations in the area,” “ISOP positively affects peoples’ lives and well being at the project,” and “ISOP provides opportunities for visitors to connect with the meanings of the resources.”

Kendall’s tau-b shows a moderate positive relationship (Tau-b=.273, p=.000, n=193). These results are consistent with the research hypothesis that states that participants who perceive benefits from the water safety program will also perceive ISOP Goal 4 to be more effective. Table 22 shows the results of the crosstabulation.

Table 22

Effectiveness of ISOP Goal 4 (Water Safety) and ISOP Benefits

		ISOP Benefits					Total
		Strongly Disagree	Disagree	Neither disagree nor agree	Agree	Strongly Agree	
Completely ineffective	Count	0	0	2	1	0	3
	%	0.0	0.0	2.8	1.0	0.0	1.6
Somewhat ineffective	Count	0	0	5	4	1	10
	%	0.0	0.0	6.9	3.9	6.7	5.2
Neither ineffective nor effective	Count	0	1	17	9	0	27
	%	0.0	50.0	23.6	8.7	0.0	14.0
Somewhat effective	Count	0	1	34	50	4	89
	%	0.0	50.0	47.2	48.5	26.7	46.1
Very effective	Count	1	0	14	39	10	64
	%	100.0	0.0	19.4	37.9	66.7	33.2
Total	Count	1	2	72	103	15	193
	%	100.0	100.0	100.0	100.0	100.0	100.0

Water Safety is Critical to the NRM Program

The last two water safety hypotheses were analyzed looking at the dependent variable of “water safety is critical to the NRM program of the Corps” (mean 3.7 on 5-point scale) and the independent variables of “participant ISOP involvement” (mean 2.9 on 5-point scale) and “perceived management support” from the water safety program (mean 3.5 on 5-point scale). In the assessment of “water safety is critical to the NRM program of the Corps,” the 5-point scale consisted of 1 = strongly disagree, 2 = disagree, 3 = neither disagree nor agree, 4 = agree, and 5 = strongly agree. In the assessment of “participant ISOP involvement,” the 5-point scale consisted of 1 = 20% or less, 2 = 21-40%, 3 = 31-60%, 4 = 61-80% and 5 = 81-100%. In the assessment of “perceived management support,” the 5-point scale consisted of 1 = not affected at all, 2 = affected a little, 3 = moderately affected, 4 = quite affected, 5 = completely affected (eliminated).

Water Safety H₇: Participants who are more actively involved with the water safety program will perceive ISOP to be critical to the Natural Resource Management Mission of the Corps of Engineers.

Water Safety H₈: Participants who perceive management support for the water safety program will perceive ISOP to be critical to the Natural Resource Management Mission of the Corps of Engineers.

Participant Water Safety Involvement

Water Safety H₇: Participants who are more actively involved with the water safety program will perceive ISOP to be critical to the Natural Resource Management Mission of the Corps of Engineers.

To test Water Safety H₇, crosstabs were performed on the dependent variable that “water safety is critical to the NRM program” and the independent variable of “participant ISOP involvement.” The variable used for determining “participant ISOP involvement” was “ISOP time dedicated to water safety efforts”. Kendall’s tau-b values indicated a weak, negative relationship (Tau-b=-.143, p=.023, n=195) between the “ISOP time dedicated to water safety efforts” and the perceived belief that “ISOP is critical to the NRM program”. As the amount of time dedicated to water safety efforts increased the perception that water safety is critical to the NRM program decreased. These results were consistent with the research hypothesis that participants who are more actively involved in water safety will perceive ISOP to be critical to the NRM program. Table 23 shows results from the crosstabulations.

Three other variables were assessed to determine participant water safety involvement. As mentioned earlier in the section reviewing Water Safety H₂, one of the survey questions involving 15 different water safety methods was broken down into two categories and then a computed mean was developed for the two

Table 23

ISOP Critical to NRM Program & ISOP Time Dedicated to Water Safety

		ISOP Time dedicated to Water Safety efforts					Total
		20% or less	21-40%	41%- 60%	61%- 80%	81%- 100%	
Strongly disagree	Count	0	0	2	0	1	3
	%	0.0	0.0	4.5	0.0	3.1	1.5
Disagree	Count	1	0	0	1	1	3
	%	2.3	0.0	0.0	2.3	3.1	1.5
Neither disagree nor agree	Count	5	1	4	5	5	20
	%	11.6	3.0	9.1	11.6	15.6	10.3
Agree	Count	18	19	24	26	17	104
	%	41.9	57.6	54.5	60.5	53.1	53.3
Strongly agree	Count	19	13	14	11	8	65
	%	44.2	39.4	31.8	25.6	25.0	33.3
Total	Count	43	33	44	43	32	195
	%	100.0	100.0	100.0	100.0	100.0	100.0

categories: water safety programs and water safety mass marketing techniques.

Again, reliability analysis revealed that the methods listed for water safety programs were internally consistent enough to be grouped together and analyzed as such (Cronbach's $\alpha=.80$). Reliability analysis on water safety mass marketing techniques was borderline consistent enough to be grouped together and

analyzed (Cronbach's $\alpha=.698$). The third variable measuring the frequency of evaluation of water safety programs was also independently analyzed. There was no significant relationship between any of these variables.

Management Water Safety Support

Water Safety H₈: Participants who perceive management support for the water safety program will perceive ISOP to be critical to the Natural Resource Management Mission of the Corps of Engineers.

To test Water Safety H₈, crosstabs were performed on the dependent variable "ISOP is critical to the NRM program of the Corps" and the independent variable of "management water safety support." The variable used for determining management water safety support was "when funding is limited, how are conducting water safety outreach affected?" There was no significant relationship found (Tau b=-.079, p=.408, n=91). This result is not consistent with the research hypothesis that states participants who perceive management support for the water safety program perceive the ISOP to be critical to the natural resources mission of the Corps.

DISCUSSION

This study sought to evaluate the Corps Interpretive Services and Outreach Program from the perspectives of those who created the program and from the perspective of the ranger staff in the field who utilize the program.

Specifically the study sought to achieve three objectives:

1. Identify the original intent of the developers of the ISOP, examine their current perspective towards the program, and explore the views of a broad cross-section of interpreters across the agency.
2. Examine the factors of participant involvement in interpretation, perceived management support for ISOP, and perceived project benefits from ISOP that influence the effectiveness of the ISOP program.
3. Examine the factors of participant involvement in interpretation, perceived management support for ISOP, and perceived project benefits from ISOP that influence the effectiveness of the Corps' Water Safety Program.

The study was successful in meeting the objectives in many ways. This study was the first study to evaluate the Corps ISOP program since before it

became official per regulations. The study compiled all of the federal land managing agencies' goals for interpretation, providing a basis for comparison and contrast. Across federal land management agencies, there are eight areas of importance for interpretation: (1) Interpretation as a management tool, (2) Education, (3) Stewardship, (4) Agency Missions, (5) Visitor Safety, (6) Visitor Orientation, (7) Support, and (8) Visitor Experience. Some of the agencies have very specialized goals as well. The study was the first to engage Corps employees who created the ISOP program, and others who had a great deal of experience in the program, in a process of in-depth interviews. The study was the first to explore the original intent of the developers of the ISOP, uncovering the history of ISOP program support and the current absence of a "champion" for the program (i.e., respondents indicated that a champion has been absent since 2006). Those who created the 1993 program believed that despite funding deficiencies that have hampered the ISOP program implementation, the ISOP goals they created then are still *relevant, appropriate* and *achievable* today. In the SWOT analysis, this study showed there are ample opportunities to enhance the program. This study showed that time and time again, experienced interpretive staff thought a lack of management support and funding were the two biggest influences in the direction of the ISOP program. When comparing the NPS Logic Model for Interpretation and Education (developed in 2006) to the

Corps program, the study showed differences of opinions on which stage of development different elements may lie. This study was crucial in the development of a draft logic model for the Corps ISOP program that can help guide direction of the program in the future. This study was the first to ask the rangers in the field who use the ISOP program their perspectives on different aspects of the program. It was the first to examine the goals of the program for importance and effectiveness. The study examined the strength and relationship between participant involvement in interpretation, perceived management support for ISOP, and perceived project benefits from ISOP and perceptions of effectiveness for both the ISOP program overall and the Corps Water Safety program in particular. Lastly, this study was the first to do a thorough examination of the Corps Water Safety Program.

Original intent of the developers of the ISOP

The history of the Corps ISOP program has never been formally documented until now. The original intent of the developers of the ISOP regulation was to enhance an already established program. Interviewees who created the most ISOP shared that there were three champions in headquarters in the 1990's, Darrell Lewis, the Chief of Natural Resource Management at the

time, George Tabb and Elisa Pelliciotto with the passion and forethought to improve the ISOP program. The team developed to create the program not only did those individuals have interpretive roles at their home projects, but most of them had an educational background in interpretation too. Most came from well known university programs and were mentored under interpretive masters. Many of the creators of the 1993 guidance came to the Corps from other agencies with more experience in interpretation. Templates from other agencies were not used in the creation of the ISOP program; however their educations and backgrounds played a part. The Corps definition of interpretation and the goals of the program tend to lead more towards the Corps missions than other agency goals.

However, many of the interviewees did not think the definitions and goals were narrow in focus. In fact, many thought they were written as broad as possible.

The reasons they were written in this manner were to meet the established objectives put forth by headquarters staff. These objectives were keeping to the missions of the agency as a primary focus as well as recruitment. Before this revision, the interviewees told me that environmental education was not allowed. The goals were written to accommodate everyone's objectives for the program. It was very apparent that all had a vested interest in interpretation, and significant time and energy was invested in creation of the program. Another interesting finding was the group of individuals selected to be on the team that created the

ISOP program did not leave the Corps to pursue other agencies or career paths. All of them have had full federal careers with the Corps.

Current Perspectives from the Field on the ISOP program

The Corps' six goals for the ISOP program have many similarities to the other land management agencies. Within the Corps the goals are not given equal weight or attention. With budgets tightening, many projects only focus on Goal 4 as directed from headquarters, if they focus on ISOP at all. It was anticipated that the many would think that the goals of ISOP may need to be re-evaluated as to their appropriateness and achievability.

One of the unexpected discoveries is that even after 20 years; most of the interviewees believed the goals of the program were still relevant. Although parts of the program may need to be revisited, the interviewees thought the goals were still viable, effective and appropriate. Survey participants also agreed that the goals are appropriate (59% agreed or strongly agreed, n=194), and achievable (58% agree or strongly agreed, n=190).

The importance versus performance analysis of the ISOP goals importance and effectiveness showed some challenges for the program. The interviewees believed that the goals were still relevant. The survey revealed that

only Goal 4, water safety met the classification of “keep up the good work.” The other goals fell into the classifications of “possible overkill” and “low priority.” There were no goals that met the classification of “concentrate here”. Goals classified as “low priority” by the survey respondents were Goal 3, civil works and military missions and Goal 5, recruitment in math and science. These goals are imperative when it comes to the internal and external communication about the agency to the public and receiving “buy in” from the other business line managers as to the importance of the ISOP program throughout the agency. Although the survey respondents considered Goals 3 and 5 to be “low priority”, the Corps needs to “concentrate here” if the ISOP program is to succeed in improving communications throughout the agency.

Interpreters are a dedicated group of people. This was first shown in the interviews by the willingness of individuals to participate. For those asked to interview, I did not have anyone decline to participate. Secondly, the dedication showed in the response rates of the surveys at 69.6%. Interpreters throughout the Corps made a point of sending emails during the snowball technique used to collect names for survey participants to make sure other interpreters they knew were in the database and would receive the survey. When the normal channels of support fell through, the interpretive community of the Corps stepped up to

assist in gathering the contacts and helped to create the final list used for interviews.

With both the interviews and the survey, results show that there is strong support for the ISOP program. When interviewers were asked to look at a NPS logic model and to determine what developmental stage the Corps' ISOP program was in relation to the NPS logic model, the interviewees were quick to point out that they thought the ISOP program was more developed than the author perceived and there are many examples where topics from that logic model are well developed. An example of this is where survey results show that 73% (n=196) of those taking the survey have had at least the Corps PROSPECT Interpretive Services course. This result confirms what the interviewees said about training when discussing the NPS logic model. The developmental stage for training within the ISOP program of the Corps should be consistent throughout the agency. Another example of this is when 82% of survey participants agreed with the statement that interpretation at my project provides opportunities for visitors to connect with the meanings of the resource (N=192). This result shows that the perception of the rangers in the field who use the program think that meaning making is at least established but not consistent. In the interviews this was reiterated by several that meaning making held importance to the group that created the most recent regulation. When reviewing

all the federal land management agency interpretive goals, enhancing the visitor experience was a goal of all of the agencies.

Participant Involvement in Interpretation

In his book *Applied Interpretation*; Knapp (2007) stated that the impact of interpreters in person cannot be overstated. When live interpreters are compared to the impact of other non-personal interpretation the results tend to reinforce the importance of the interpreter (Knapp, 2007). The National Park Service published a report titled *Visitor Use and Evaluation of Interpretive Media* in 2003. This report also states that for visitors, ranger-guided programs are among the most important aspects of a park's interpretive offerings (National Park Service, 2003). In the NPS report *Visitor Voices* it states that ranger-led programs far surpassed any other program type as respondents' most meaningful onsite interpretive experience (Coble et.al., 2005).

It has long been said in the Corps of Engineers that the park ranger is the face of the Corps. During the interview phase of the study, the SWOT analysis found that one of the strengths of the ISOP program is that the ISOP program is the "face of the Corps." Interviewees spoke of the importance of dedicating time and staff to ISOP. The SWOT analysis revealed a weakness in the program is

the lack of staff dedicated to ISOP. Surveys showed that participants that are more actively involved perceive ISOP goals to be more important, more effective and critical to the NRM mission of the Corps.

Both phases of this study support additional time and dedicated staff to the ISOP program; however, when survey applicants were asked on an average annual basis, how many hours do you spend doing interpretation 66% answered 9 or less hours per week (N=230). With that kind of time spent on ISOP it becomes a collateral duty. The lack of staff is not just in ranger-led programs but in total staffing of the ISOP program. This is a disconnect within the program. Although there are some field projects where interpretation has established roots and there are staff dedicated to ISOP, as a whole the program lacks in staffing and time dedicated to ISOP goals.

Perceived Management Support

Perceived organizational support reflects employees “general belief that their work organization values their contributions and cares about their well-being” (Byrnes & Hochwarter, 2008; Karatepe, 2012; Rhoades & Eisenberger, 2002). In the hospitality industry research shows that “despite their critical role in the service delivery process, frontline employees are confronted with a number of

problems emerging from long work hours, customer aggression, excessive job demands, and irregular and inflexible work schedules” (Karatepe). Many people don’t look at the role of an interpreter as being in the hospitality industry. But as the “face of the Corps,” the interpreter is that frontline employee confronted with all of those issues. Research is showing that the “frontline employees’ appraisal of organizational support leads to an emotional response such as career satisfaction. Employees’ feelings of satisfaction with the career in the current organization regarding pay, advancement, achievement of career goals, and development of new skills in turn determine their performance outcomes” (Karatepe).

During the interview phase, interviewees listed a lack of management support from the top down as a weakness in the SWOT analysis. This weakness appeared to have similar levels of importance to the program as budget constraints based on the number of times it was mentioned in the interview phase. Interviewees stated that the lack of a champion for this program in Headquarters could mean that managers further down the line would fail to see the importance of the program and pass it by in exchange for different priorities.

Based on the interviews, it was anticipated that the survey results would show that perceived management support was significant in regards to importance of ISOP goals, effectiveness of the ISOP goals and critical to the

NRM program. The findings of this study did not find this to be the case. When looking at perceived management support, the only time a significant relationship was proven was for H₈ when participants who perceived management support of ISOP also perceived the goals of the program to be more effective.

The Corps of Engineers as a military organization has a revolving door of leadership at the highest levels. With that rotation the command emphasis changes importance to different aspects of the Corps missions. Those who created the ISOP program made comments about the General's thoughts about recruitment to the organization in the future and said that was the trigger for updating the program. In the last two decades the ISOP program has seen support for a couple different goals. During the Lewis and Clark Bicentennial, General Robert Flowers was very supportive of efforts to interpret the Army's role in the bicentennial. Since then, the command emphasis for the Natural Resource Management Program has been heavily geared towards the Corps Water Safety Program. In the survey, respondents were asked if their project had increased the amount of money spent on water safety after General Carl Strock made the mandate to reduce water related fatalities and 58.2% did increase spending (n=189). Both the Lewis and Clark Bicentennial and the Corps water safety program were highlighted by interviewees and survey participants as having been successful interpretive efforts in this study.

Perceived Project Benefits from ISOP

As the profession of interpretation has developed, it has diversified into multiple trajectories of growth (Benton, 2011). The perceived benefits for land management agencies are numerous. The comparison of the interpretive goals of the land management agencies in this study gives readers the opportunity to view the commonalities and differences in these goals. Based on these lists, the reader can deduce that the goals are beneficial to their project or park. The common goals or benefits are interpretation as a management tool, education, stewardship, agency missions, visitor safety, visitor orientation, support and visitor experience. “Perhaps the most pervasive but subtle change in the practice of interpretation is the expectation that interpreters convey management goals *in addition to* connecting visitors with resources” (Benton, 2011).

In April 2011, the Corps released its Recreation Strategic Plan. This document lays out the future of the Corps recreation program. Although many changes are going to take place to align the program with fiscal challenges, this plan contains focused communication to both internal and external audiences as one of the priorities for change and also references visitor centers and public outreach opportunities (US Army Corps of Engineers, 2011). This study ties into the Recreation Strategic plan in finding that participants who perceive project

benefits from ISOP perceived the ISOP goals to be more important, more effective and critical to the NRM mission of the Corps. Improving communication strategies is just one additional benefit the ISOP program can provide the Corps.

In recent years the Corps has standardized the communications strategy at a national level so that the agency speaks with one voice whether it is in Honolulu District or New York District. The same procedures are used to create the individual communications strategy for any issue at hand. The Corps looks at a variety of different issues such as defining the issue and what triggered the interest, identifying the key communication goals for the situation, looking at the stakeholders, partners and their interests in the topic, and creating a SWOT analysis to help create the most effective tactics, tools and messages to achieve desired goals. From this analysis, communication goals and metrics are established. Themes, key messages and talking points are created and an action plan is created on how to implement this communication plan. Before the plan is presented and implemented, evaluation tools are identified and then the plan is presented and implemented. (US Army Corps of Engineers, 2012b). Interpretation was not incorporated into this strategy.

One common way this communication strategy used is in public meetings. These meetings “at best add a small degree of input and legitimacy to a planning process. At worst, cynical, empty public relations gestures prevail, as in the

rigged 'town meetings' that are so common these days" (Public Agenda, 2008). With public meetings receiving this kind of scrutiny, "attendance in public meetings tends to be low and characterized by significant self-selection biases due to lack of interest among many members of the lay public, and disproportionately higher motivations among small, opinionated issue publics to participate and express their viewpoints" (Scheufele, 2011). Many agencies are starting to change the way they interact with the public. Instead of public meetings where communication has already been defined and communication goals and metrics established, some are stepping out of the comfort zone and into a new realm of facilitated dialog programs for difficult issues. The NPS began training interpreters to use dialog in their programs in an effort to increase the relevance of the programs in 2012 (Blaney, 2013).

In this study many of the interviewees thought that using the ISOP as a tool in the communication strategy is an opportunity not just at the project level but at all levels of communication within the agency. If you take the strength of the ISOP program, being the face of the Corps, partnered with the opportunities from the SWOT analysis, you have a powerful and beneficial combination of tools for the Corps. The opportunities of selling the program to an internal audience, using ISOP as a key communication strategy within the Corps in facilitated dialogue programs to improve communications with the public and increase

partnerships have the potential to create very positive agency-wide changes that could make the agency both stronger and more efficient if leadership would make it a priority. Even if everyone who had to present at public meetings were required to take a course in interpretation, it could be the catalyst that fuels change within the agency.

Incorporating the opportunity to use ISOP as a tool for communications to both internal and external audiences in the Corps ties directly with Goal 1, achieve management objectives using interpretive techniques and Goal 3, incorporate Corps civil works and military missions and accomplishments into interpretive programming. However, the survey results and importance performance measures show that survey participants place Goal 3 as less effective and less important and therefore should be placed at a lower priority. This is contradictory to the results of the SWOT analysis that found opportunities for using ISOP as a key communications strategy for management objectives and missions of the Corps. If the agency takes advantage of the opportunities presented in the SWOT, then Goals 1 and 3 need to be perceived as more important and more effective. These goals should receive a higher priority, more focus and attention than other goals of the program.

The Corps Water Safety Program

The Corps water safety program has received more participant involvement by interpreters, perceived management support and perceived benefits from the ISOP program than any goal within the Corps ISOP program. Goal 4, involving safety and traditionally where the water safety program fits, is deemed the strongest and most likely of the goals to be met within the agency. This was confirmed in the importance, performance measure assessed in the survey results where the means of each goal for importance were plotted with the means of each goal for effectiveness. It was also confirmed by survey participants when 61% of participants said they spend 41% of their time or greater working on water safety when they are working on interpretation.

Results from the water safety hypotheses were unanticipated findings. Considering the results of the SWOT analysis from the interviews where Goal 4 was listed as one of the more successful programs within interpretation, it was anticipated that most of the water safety hypotheses would be significant. What these results show is that active participation in water safety programs does not translate into perceived importance for the water safety goal, or the perceived effectiveness of Goal 4.

Another surprise result involved perceived management support for the water safety program. There was no relationship between perceived management support and any of the dependent variables for water safety. Considering the top down support the water safety program received, this result was unexpected. Survey results show it had no significances as an independent variable in the water safety program. Just because there is perceived management support for water safety does not mean that there is a perception of Goal 4 importance, effectiveness or a perception that ISOP is critical to the NRM mission. This result conflicts with the interviewees comments about management support for water safety gives it more importance for interpreters in the field to focus on water safety versus other goals of the ISOP program.

Perceived benefits to the water safety program was significantly related to the perceived importance and effectiveness of Goal 4. What these results show are that the perceived benefits of the water safety program in reducing the number of water related accidents and fatalities are the driving force behind why the program is perceived to be important and effective.

Limitations

Over the course of this study, there has been several field level management changes at the project in which the author worked. Work constraints from overlapping duties caused significant delays in the completion of this study. Interview transcriptions were delayed. By the time they were complete, some of the interviewees were retired and the researcher was not able to track everyone down for verification of their transcripts. Although there was ample data created by the survey instrument, due to time constraints and the overwhelming amount of data available, the researcher chose to narrow the focus to these specific dependent variables: ISOP goals are important, ISOP goals are effective, and ISOP goals are critical to the NRM mission of the Corps and these independent variables: participant involvement in ISOP, perceived management support for ISOP and perceived project benefits from ISOP.

Another limiting factor to the study is in the population of rangers in the field the survey instrument covered. This population is hard to establish due to how decentralized the Corps is with the NRM program. No database existed that could be used for the survey instrument. Internal customer service within the proper chain of command to retrieve the information was reliable in several districts, sketchy in others and none existent in a couple as well. Even with all the

methods used to collect names, the list of those that received the survey instrument may not have been complete.

For an agency that conducts a significant amount of research, there has not been a great deal of research on the Corps Natural Resource Management program and even less on the ISOP program.

In the interview phase when discussing the comparison between the NPS logic model and the measure development in the Corps' ISOP program, one thing that should have been better defined is the differences between the categories of consistent throughout the agency, established but not consistent, incipient and not developed. These were based on the perception of the interviewees and may have been different than the perceptions of the author. While the author did define to all interviewees that incipient meant in infancy stages, established but not consistent may have been perceived to be different to different individuals. To some individuals, established but not consistent may have meant that of those projects known throughout the Corps for their interpretive skills, the majority of those should be rated higher for inputs, activities, outputs, outcomes and impacts. To other individuals, established but not consistent may have meant that of the 456 Corps projects the majority of them were rated higher for inputs, activities, outputs, outcomes and impacts. This would change the perceptions of how the interviewees viewed the ISOP program

and whether they still thought particular topics should rank as established but not consistent or lower into the incipient or not developed columns.

The survey instrument is also a limitation to this study. In the development of the survey instrument more time should have been spent designing the survey questions so that more relationships between variables could have been reviewed. Different forms of questions used in this survey prevented the ability to compare relationships because the questions were not asked in a similar manner. If more research and time would have been spent developing the questions a higher level analysis and a deeper understanding of the significance of different aspects of the program could have been ascertained.

Recommendations

Based on the results of this study, the following are my recommendations:

Invest in Excellence

Invest in and further develop the excellence found within the interpretive community of the Corps. Improve the participant involvement in the ISOP program by increasing the number of staff and the amount of time spent working on ISOP. If the program cannot afford this nationally, then evaluate the program

and create benchmarks for selecting projects where interpretation should have a greater footprint such as projects that have an established ISOP program and have a solid foundation with staff to support it. Set up a small percentage of overhead that projects could apply for that could enhance their ISOP program and facilities. Encourage handshake partnerships to have a special point category for ISOP related partnerships in the handshake funding. Line item funding for labor, hours, support and backlog maintenance projects to those flagship programs and Class A and B visitor centers that are the “face of the Corps” to the public. The Corps “best of the best” should look like and provide Class A services to customers. If they are truly the flagships of the Corps then their exhibit galleries should not look like a hodgepodge of exhibit put together from the leftovers of what they could salvage from donations and scraps. This study showed that those who are more actively involved in the ISOP program perceive ISOP goals to be more important, effective and perceive ISOP to be critical to the NRM mission of the Corps.

Improve Communications

Improve relationships between internal and external audiences by integrating ISOP into the public planning process and incorporate it into the strategic communications plan. Add to the Corps PROSPECT course segments

on improving communication internally and externally to change the perception of how, what and why interpretation is used. Incorporate interpretive training into the individual development plans of all entities within the Corps that interface with the public and train them on how to be effective using it. Incorporate facilitated dialog sessions into the repertoire of Corps public outreach. This study showed that the ISOP program is a tool that can be used in all aspects of the Corps, not just isolated to the interpreters within the natural resource management program.

Increase the Vision

Incorporate all the goals of the ISOP program into building a stronger foundation. Many interpreters within the Corps need to widen their vision of how the program can be used. The goals of ISOP were written in broad enough context to umbrella over the entire organization. Encourage all to find ways to incorporate all the ISOP goals into project operations and not just focus on Goals #2 and #4, the two goals perceived to be high in important and effective in this study. Use the Gateway and post suggestions on how to incorporate each goal of the ISOP program into project operations. Increase partnerships with agencies, organizations and entities that have like-minded goals and create or enhance interpretive experiences that compliment the goals of ISOP. This study showed

that although the attention varies, all of the goals of the ISOP program are still important, effective and applicable to the Corps NRM program.

Identify and Incorporate Efficiencies

Create a Project Delivery Team to identify efficiencies within the ISOP program, including the evaluation of visitor centers, interpretive programs and interpretive products. Create a logic model that incorporates all the efficiencies of the ISOP into a plan for future development and management of the program. Create affordable standardized products, above and beyond water safety, that meet the needs of the program, the public and personnel and in turn provide additional benefits to the NRM program. This study showed that the standardization of the water safety program has been one of the factors that made it successful and has provided tools and vision from those interviewed as to where they think the current development stages of the ISOP program.

Inspire Continued Success through Creative Solutions

The water safety program has been effective for many years. Unfunded mandates from upper management to decrease water related fatalities can only go so far in a climate of declining staffs, declining budgets and a target audience that no one has figured out how to reach. Provide the tools to create success

instead of mandating it without funding. Increase staffing levels to increase programming efforts and patrols on the waterways. Partner with others and fund a study to determine how to reach that target audience of 18-35 year old males and implement the results. Another way to inspire success is to support training opportunities for the “face of the Corps”. There are many excellent training courses available for interpretive training. These should be added to individual development plans. Partnerships should be cultivated with other parks or agencies that are nearby that have well developed training facilities. This study showed that management support of this program is not a significant factor in the perception of water safety's importance or effectiveness, so inspire interpreters so they can move from “good to great.”

In the challenges facing the Corps in the future, many things will be evaluated, changed or eliminated. Interpretation is one of those programs that hang in the balance. Interpretation if used effectively could a tool to change the face of the agency. George Tabb, former Chief of Natural Resource Management for the Corps and a champion of the ISOP program used to tell people, “People ask us if we can really afford to do interpretation and I always tell them we can’t afford not to do interpretation.” It is that important.

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APPENDIX A

US Army Corps of Engineers

Visitor Center Comment Card Survey



US Army Corps
of Engineers

Visitor Center Comment Card

OMB Approval 0710-0001, Exp 30 Nov 2009

Survey: ☐ Scheduled ☐ Solicited
☐ Self-service ☐ Tour Rep

Season: ☐ Primary ☐ Secondary

Please help us serve you better at the _____ Visitor Center!

Today's Date: ____/____/____
(MM DD YYYY)

About your visit here today:

1. Have you ever been to this Visitor Center before? (Choose one)

☐ Yes ☐ No ☐ Not Sure

2. What was your *primary* reason for coming here today? (Choose one)

- ☐ View the exhibits
☐ Take a guided tour
☐ Attend special program or event
☐ Use the restroom
☐ Take a break from travel
☐ Obtain information or brochures
☐ Purchase recreation area pass
☐ Browse the bookstore
☐ Other: _____

3. Did you come here today with any children 5 to 16 years old?

☐ Yes ☐ No

How *important* were each of the following to your visit? (Check one box for each feature)

Visitor Center Feature	Very Important	Important	Somewhat Important	Not Important	NA
Facilities:					
Exhibits	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Restrooms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Parking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Accessibility to persons with disabilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Programs and Services:					
Interpretive presentations and films	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Guided tours	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pamphlets and brochures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Having staff available for assistance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bookstore	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall:					
Learning opportunities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Exhibits and activities for children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

How *satisfied* were you with each of the following today? (Check one box for each feature)

Visitor Center Feature	Very Good	Good	Not Good Not Poor	Poor	Very Poor	NA
Facilities:						
Exhibits	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Restrooms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Parking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Accessibility to persons with disabilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Programs and Services:						
Interpretive presentations / films	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Guided tours	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pamphlets and brochures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Availability of visitor center staff	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Helpfulness of visitor center staff	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Items for sale in the bookstore	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall:						
Learning experience	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Exhibits and activities for children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall satisfaction with the visitor center	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

About Yourself:

1. Home postal (ZIP) Code: (Write in) _____

2. You live in: (Choose one)
☐ U. S. ☐ Canada ☐ Mexico
☐ Other

3. Age: (Choose one)
☐ under 25 ☐ 25-44
☐ 45-61 ☐ 62+

4. Gender: (Choose one)
☐ Female ☐ Male

5. Ethnic affiliation: (Choose one)
☐ Hispanic ☐ Non-Hispanic

6. Racial affiliation: (Choose one)
☐ American Indian or Alaska Native
☐ Asian or Asian American
☐ Black or African American
☐ Native Hawaiian or other Pacific Islander
☐ White or Caucasian
☐ Bi-racial or Multi-racial
☐ Other

What did you **like** most about the visitor center? (Describe)

What **improvements** would you like to see here? (Describe)

APPENDIX B

Summary of Interpretive Goals from Six Federal Land and Water Management Agencies

Table 1

*Summary of Interpretive Goals from
Six Federal Land and Water Management Agencies*

(COE, 1993; USFWS, 2006; USFS, 1990; NPS, 2005; BOR, 2007; BLM, 1983; NPS 2006b)

**The letter at the end of the reference coordinates with the lettering system in Appendix B*

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Goals of Interpretation	COE	FWS	USFS	NPS	BOR	BLM
Interpretation as a management tool						
Achieve management objectives using interpretive techniques. (COE, 1993,A)	X					
To implement an interpretive program that helps solve management problems and aids in the development of public understanding of Forest Service management. (USFS, 2006,E)			X			
To implement an interpretive program that helps solve management problems and aids in the development of public understanding of Forest Service management. (USFS, 1990,E)			X			
Mitigate resource user conflicts involving recreation; (BLM, 1983,C)						X
Minimize conflicts with visitors participating in other compatible wildlife-dependent recreational activities. (USFWS, 2006,F)		X				
Promote informed public involvement in resource decisionmaking by explaining management programs, policy, and planning efforts; (BLM, 1983,D)						X
Improve visitor and employee safety using interpretive techniques. Use outreach to accomplish ISOP goals, including interpreting Corps missions, promoting stewardship, saving lives, and solving management problems. (COE, 1993,D)	X					

Goals of Interpretation		COE	FWS	USFS	NPS	BOR	BLM
The public understands critical resource decisions, initiatives, and stewardship actions. (NPS, 2006b, T)					X		
Interpretation as a management tool continued							
Park neighbors and community decision makers gain understanding of park significance, resources, issues, and mission, and its values in local, regional, and national contexts (NPS, 2006b, O)					X		
Education							
<i>Natural Resource Education</i>							
Providing information and interpretation on the recreational, natural, cultural, and historical resources within the project area and regionally; (BOR, 2007,D)						X	
To increase visitor understanding of natural and cultural history principles and their relation to land management techniques (USFS 1990,G)				X			
Promote visitor understanding of, and increase appreciation for, America's natural and cultural resources and conservation history by providing safe, informative, enjoyable, and accessible interpretive opportunities, products and facilities. (USFWS, 2006, A)			X				
To help visitors know and experience the natural environment (USFS, 1990,D)				X			
Develop public awareness of society's dependence on a continuing flow of natural resources and develop support for the principle of balancing the use of resources through conservation and multiple-use management (BLM, 1983,G)							X
Promote public recognition of the need to protect our natural and cultural heritage to assure present and future generations continued opportunities to learn; (BLM, 1983,B)							X
Understand conservation or preservation issues relevant to the park (NPS, 2006b, J)					X		
<i>Cultural Resource Education</i>							
Promote public recognition of the need to protect our natural and cultural heritage to assure present and future generations continued opportunities to learn; (BLM, 1983,B)							X

Goals of Interpretation		COE	FWS	USFS	NPS	BOR	BLM
To increase visitor understanding of natural and cultural history principles and their relation to land management techniques (USFS 1990,G)				X			
Promote visitor understanding of, and increase appreciation for, America's natural and cultural resources and conservation history by providing safe, informative, enjoyable, and accessible interpretive opportunities, products and facilities. (USFWS, 2006, A)			X				
Education, Cultural Resource Education continued							
Understand conservation or preservation issues relevant to the park (NPS, 2006b, J)					X		
<i>Environmental Education</i>							
Provide environmental education to foster voluntary stewardship of natural, cultural, and created resources. (COE, 1993,B)		X					
<i>Water Education</i>							
Educating the public about water resources, water conservation, and water safety. (BOR, 2007,F)						X	
Educating the public about water resources, water conservation, and water safety. (BOR, 2007,F)						X	
Educating the public about water resources, water conservation, and water safety. (BOR, 2007,F)						X	
<i>Education Other</i>							
Providing information and interpretation on the recreational, natural, cultural, and historical resources within the project area and regionally; (BOR, 2007,D)						X	
The interpretive process should also encourage interest in math and science, including career interest. (COE, 1993, E)		X					
Learn new information and concepts about the park or program topic, and understand the purposes, scope, and significance of the National Park system (NPS, 2006b, B)					X		

Goals of Interpretation		COE	FWS	USFS	NPS	BOR	BLM
Learn new information and concepts about the park or program topic, and understand the purposes, scope, and significance of the National Park system (NPS, 2006b, B)					X		
Achieve defined learning objectives (NPS, 2006b, G)					X		
Understand park and community resources in individual, regional, national, and global contexts (NPS, 2006b, H)					X		
Understand the role that park and community resources can play in achieving educational objectives (NPS, 2006b, L)					X		
Acquire skills and tools for engaging their students with parks as classrooms (NPS, 2006b, M)					X		
Education, Education Other continued							
Make continued use of the parks and community as teaching resources, sharing park and community resources with their students (NPS, 2006b, N)					X		
Stewardship							
<i>Ethic</i>							
The goal of National Park Service (NPS) interpretive and educational programs is to provide memorable and meaningful learning and recreational experiences, foster development of a personal stewardship ethic, and broaden public support for preserving park resources (NPS 2005).					X		
Develop a public land use ethic and reduce BLM's administrative and maintenance costs by developing public cooperation in protecting the public lands from wildfire, vandalism, littering and pollution; (BLM, 1983,A)							X
<i>Stewardship of Natural Resources</i>							
Provide environmental education to foster voluntary stewardship of natural, cultural, and created resources. (COE, 1993,B)		X					
Promote public recognition of the need to protect our natural and cultural heritage to assure present and future generations continued opportunities to learn; (BLM, 1983, B)							X

Goals of Interpretation	COE	FWS	USFS	NPS	BOR	BLM
Promote visitor understanding of, and increase appreciation for, America's natural and cultural resources and conservation history by providing safe, informative, enjoyable, and accessible interpretive opportunities, products and facilities. (USFWS, 2006, A)		X				
Develop a sense of stewardship leading to actions and attitudes that reflect interest and respect for wildlife resources, cultural resources, and the environment. (USFWS, 2006, B)		X				
Have an enjoyable, satisfying, memorable, and educational experience, and appreciate the recreational, historical, scientific, cultural, and economic benefits of the National Park System (NPS, 2006b, C)				X		
<i>Stewardship of Cultural Resources</i>						
Provide environmental education to foster voluntary stewardship of natural, cultural, and created resources. (COE, 1993,B)	X					
Stewardship, Stewardship of Cultural Resources continued						
Promote public recognition of the need to protect our natural and cultural heritage to assure present and future generations continued opportunities to learn; (BLM, 1983,B)						X
Promote visitor understanding of, and increase appreciation for, America's natural and cultural resources and conservation history by providing safe, informative, enjoyable, and accessible interpretive opportunities, products and facilities. (USFWS, 2006, A)		X				
Develop a sense of stewardship leading to actions and attitudes that reflect interest and respect for wildlife resources, cultural resources, and the environment. (USFWS, 2006, B)		X				
Have an enjoyable, satisfying, memorable, and educational experience, and appreciate the recreational, historical, scientific, cultural, and economic benefits of the National Park System (NPS, 2006b, C)				X		
<i>Protection of Public Lands</i>						

Goals of Interpretation		COE	FWS	USFS	NPS	BOR	BLM
Develop a public land use ethic and reduce BLM's administrative and maintenance costs by developing public cooperation in protecting the public lands from wildfire, vandalism, littering and pollution; (BLM, 1983, A)							X
Develop a sense of stewardship leading to actions and attitudes that reflect interest and respect for wildlife resources, cultural resources, and the environment. (USFWS, 2006, B)			X				
The goal of National Park Service (NPS) interpretive and educational programs is to provide memorable and meaningful learning and recreational experiences, foster development of a personal stewardship ethic, and broaden public support for preserving park resources (NPS 2005).					X		
Care about and actively care for park resources and values (NPS, 2006b, E)					X		
<i>Other</i>							
Provide environmental education to foster voluntary stewardship of natural, cultural, and created resources. (COE, 1993,B)		X					
To assist those visitors to the National Forests, research projects, and State and Private Forestry locations in gaining a greater appreciation of the role of conservation in the development of the Nation's heritage and culture. (USFS, 1990,A)				X			
Stewardship, Other continued							
Develop public awareness of society's dependence on a continuing flow of natural resources and develop support for the principle of balancing the use of resources through conservation and multiple-use management (BLM, 1983,G)							X
Improve visitor and employee safety using interpretive techniques. Use outreach to accomplish ISOP goals, including interpreting Corps missions, promoting stewardship, saving lives, and solving management problems. (COE, 1993,D)		X					
<u>Agency Missions</u>							
To promote visitor understanding of the Forest Service, the National Forest System, Forestry Research and State and Private Forestry programs. (USFS,1990,B)				X			

Goals of Interpretation		COE	FWS	USFS	NPS	BOR	BLM
To expand the number of interpretive associations which contribute to public understanding of Forest Service practices, support interpretive service objectives, increase public awareness, and aid in management of National Forest resources. (USFS,1990,F)				X			
Incorporate Corps civil works and military missions and accomplishments into interpretive programming. (COE, 1993,C)		X					
Informing the public about Reclamation and water projects; (BOR, 2007,A)						X	
Provide quality interpretive experience that help people understand and appreciate the individual refuge and its role in the Refuge System.(USFWS, 2006, C)			X				
Improve visitor and employee safety using interpretive techniques. Use outreach to accomplish ISOP goals, including interpreting Corps missions, promoting stewardship, saving lives, and solving management problems. (COE, 1993,D)		X					
Learn new information and concepts about the park or program topic, and understand the purposes, scope, and significance of the National Park system (NPS, 2006b, B)					X		
Understand the park's place within the National Park System (NPS, 2006b, I)					X		
Park neighbors and community decision makers gain understanding of park significance, resources, issues, and mission, and its values in local, regional, and national contexts (NPS, 2006b, O)					X		
Visitor Safety							
Improve visitor and employee safety using interpretive techniques. Use outreach to accomplish ISOP goals, including interpreting Corps missions, promoting stewardship, saving lives, and solving management problems. (COE, 1993,D)		X					
Helping to provide for visitor safety and enjoyment; and (BOR, 2007,E)						X	
Promote visitor understanding of, and increase appreciation for, America's natural and cultural resources and conservation history by providing safe, informative, enjoyable, and accessible interpretive opportunities, products and facilities. (USFWS, 2006, A)			X				

Goals of Interpretation		COE	FWS	USFS	NPS	BOR	BLM
Inform visitors of health and safety hazards and precautions necessary to prevent accidents; and (BLM, 1983, F)							X
Improve visitor and employee safety using interpretive techniques. Use outreach to accomplish ISOP goals, including interpreting Corps missions, promoting stewardship, saving lives, and solving management problems. (COE, 1993,D)		X					
Visitors have a safe park experience without creating adverse impacts to park resources and values (NPS, 2006b, S)					X		
Visitor Orientation							
Describing other opportunities and facilities that are available within the project; (BOR, 2007,C)						X	
Describing other opportunities and facilities that are available within the project; (BOR, 2007,C)						X	
To inform visitors of recreation opportunities and facilities on the National Forests. (USFS, 1990,C)				X			
To inform visitors of recreation opportunities and facilities on the National Forests. (USFS, 1990, C)				X			
Visitors have easy access to the orientation information they need to have an enjoyable park experience (NPS, 2006b, R)					X		
Support							
The goal of National Park Service (NPS) interpretive and educational programs is to provide memorable and meaningful learning and recreational experiences, foster development of a personal stewardship ethic, and broaden public support for preserving park resources (NPS 2005).					X		

Goals of Interpretation	COE	FWS	USFS	NPS	BOR	BLM
To expand the number of interpretive associations which contribute to public understanding of Forest Service practices, support interpretive service objectives, increase public awareness, and aid in management of National Forest resources. (USFS, 1990, F)			X			
Assist refuge staff, volunteers, and community support groups in attaining knowledge, skills and abilities in support of interpretation. (USFWS, 2006, E)		X				
The interpretive process should also encourage interest in math and science, including career interest. (COE, 1993,E)	X					
Park management and staff have a stronger awareness of and connection to local communities and local organizations (NPS, 2006b, Q)				X		
Have an enjoyable, satisfying, memorable, and educational experience, and appreciate the recreational, historical, scientific, cultural, and economic benefits of the National Park System (NPS, 2006b, C)				X		
Visitor Experience						
<i>Recreational</i>						
The goal of National Park Service (NPS) interpretive and educational programs is to provide memorable and meaningful learning and recreational experiences, foster development of a personal stewardship ethic, and broaden public support for preserving park resources (NPS 2005).				X		
Provide opportunities for quality recreational and interpretive experiences consistent with criteria describing quality found in 605FW1.6. (USFWS, 2006, D)		X				
Enhancing the quality of recreation and tourism opportunities for all visitors, including those with physical, sensory, and cognitive impairments (BOR, 2007,B)					X	
Visitor Experience, Recreation continued						

Goals of Interpretation	COE	FWS	USFS	NPS	BOR	BLM
Enhance visitors' recreation experiences; (BLM, 1983,E)						X
Have an enjoyable, satisfying, memorable, and educational experience, and appreciate the recreational, historical, scientific, cultural, and economic benefits of the National Park System (NPS, 2006b, C)				X		
<i>Educational</i>						
The goal of National Park Service (NPS) interpretive and educational programs is to provide memorable and meaningful learning and recreational experiences, foster development of a personal stewardship ethic, and broaden public support for preserving park resources (NPS 2005).				X		
Have an enjoyable, satisfying, memorable, and educational experience, and appreciate the recreational, historical, scientific, cultural, and economic benefits of the National Park System (NPS, 2006b, C)				X		
<i>Interpretive</i>						
Provide quality interpretive experience that help people understand and appreciate the individual refuge and its role in the Refuge System.(USFWS, 2006, C)		X				
Form their own emotional and intellectual connections with the meanings/significance of the resource (NPS, 2006b, F)				X		
<i>General</i>						
Enhance the visitors' experience and enjoyment by anticipating their needs and providing interpretive resources to meet those needs. (COE, 1993,F)	X					
Helping to provide for visitor safety and enjoyment; and (BOR, 2007,E)					X	

Goals of Interpretation		COE	FWS	USFS	NPS	BOR	BLM
Enhancing the quality of recreation and tourism opportunities for all visitors, including those with physical, sensory, and cognitive impairments (BOR, 2007,B)						X	
Visitor Experience, General continued							
Promote visitor understanding of, and increase appreciation for, America's natural and cultural resources and conservation history by providing safe, informative, enjoyable, and accessible interpretive opportunities, products and facilities. (USFWS, 2006, A)			X				
Promote visitor understanding of, and increase appreciation for, America's natural and cultural resources and conservation history by providing safe, informative, enjoyable, and accessible interpretive opportunities, products and facilities. (USFWS, 2006, A)			X				
To help visitors know and experience the natural environment. (USFS, 1990, D)				X			
Have an enjoyable, satisfying, memorable, and educational experience, and appreciate the recreational, historical, scientific, cultural, and economic benefits of the National Park System (NPS, 2006b, C)					X		
Find personal (intellectual and emotional) meaning and relevance in National Park resources (NPS, 2006b, A)					X		
Have an enjoyable, satisfying, memorable, and educational experience (NPS, 2006b, K)					X		
Want to return to parks, visit other parks, and share park experiences with others (NPS, 2006b, D)					X		
Use							

Goals of Interpretation	COE	FWS	USFS	NPS	BOR	BLM
Want to return to parks, visit other parks, and share park experiences with others (NPS, 2006b, D)				X		
Visitors have a safe park experience without creating adverse impacts to park resources and values (NPS, 2006b, S)				X		
Other						
Other continued						
Underserved audiences have a stronger awareness of and connection to parks (NPS, 2006b, P)				X		
Data collected through hands-on science contributes to the body of scientific knowledge (NPS, 2006b, U)				X		

APPENDIX C

Federal Land Management Agency Goals for Interpretation

National Park Service

The goal of National Park Service (NPS) interpretive and educational programs is to provide memorable and meaningful learning and recreational experiences, foster development of a personal stewardship ethic, and broaden public support for preserving park resources (National Park Service 2005).

Comprehensive Program Model, Detailed Version for Interpretive Activities – Outcomes for Participants and Visitors:

- A) Find personal (intellectual and emotional) meaning and relevance in National Park resources
- B) Learn new information and concepts about the park or program topic, and understand the purposes, scope, and significance of the National Park system
- C) Have an enjoyable, satisfying, memorable, and educational experience, and appreciate the recreational, historical, scientific, cultural, and economic benefits of the National Park System
- D) Want to return to parks, visit other parks, and share park experiences with others
- E) Care about and actively care for park resources and values

Comprehensive Program Model, Detailed Version for Curriculum-Based Education Activities – Outcomes for Teachers, and Adult and Youth Learners:

- F) form their own emotional and intellectual connections with the meanings/significance of the resource.
- G) Achieve defined learning objectives
- H) Understand park and community resources in individual, regional, national, and global contexts
- I) Understand the park's place within the National Park System
- J) Understand conservation or preservation issues relevant to the park
- K) Have an enjoyable, satisfying, memorable, and educational experience
- L) Understand the role that park and community resources can play in achieving educational objectives

- M) Acquire skills and tools for engaging their students with parks as classrooms
- N) Make continued use of the parks and community as teaching resources, sharing park and community resources with their students

Comprehensive Program Model, Detailed Version for Community Engagement, Information, and Other Activities – Outcomes for Short and Medium Term:

- O) Park neighbors and community decision makers gain understanding of park significance, resources, issues, and mission, and its values in local, regional, and national contexts
- P) Underserved audiences have a stronger awareness of and connection to parks
- Q) Park management and staff have a stronger awareness of and connection to local communities and local organizations
- R) Visitors have easy access to the orientation information they need to have an enjoyable park experience
- S) Visitors have a safe park experience without creating adverse impacts to park resources and values
- T) The public understands critical resource decisions, initiatives, and stewardship actions.
- U) Data collected through hands-on science contributes to the body of scientific knowledge (National Park Service, 2007b).

US Forest Service

The **US Forest Service (USFS)** lists their objectives of interpretive services as:

1. To assist those visitors to the National Forests, research projects, and State and Private Forestry locations in gaining a greater appreciation of the role of conservation in the development of the Nation's heritage and culture.
2. To promote visitor understanding of the Forest Service, the National Forest System, Forestry Research and State and Private Forestry programs.

3. To inform visitors of recreation opportunities and facilities on the National Forests.
4. To help visitors know and experience the natural environment.
5. To implement an interpretive program that helps solve management problems and aids in the development of public understanding of Forest Service management.
6. To expand the number of interpretive associations which contribute to public understanding of Forest Service practices, support interpretive service objectives, increase public awareness, and aid in management of National Forest resources.
7. To increase visitor understanding of natural and cultural history principles and their relation to land management techniques (United States Forest Service 1990).

Bureau of Land Management

The **Bureau of Land Management (BLM)** has 7 objectives of interpretive services:

- A. Develop a public land use ethic and reduce BLM's administrative and maintenance costs by developing public cooperation in protecting the public lands from wildfire, vandalism, littering and pollution;
- B. Promote public recognition of the need to protect our natural and cultural heritage to assure present and future generations continued opportunities to learn;
- C. Mitigate resource user conflicts involving recreation;
- D. Promote informed public involvement in resource decisionmaking by explaining management programs, policy, and planning efforts;
- E. Enhance visitors' recreation experiences;
- F. Inform visitors of health and safety hazards and precautions necessary to prevent accidents; and
- G. Develop public awareness of society's dependence on a continuing flow of natural resources and develop support for the principle of balancing the use of resources through conservation and multiple-use management (Bureau of Land Management, 1983).

US Fish and Wildlife Service

The **US Fish and Wildlife Service** defines their guiding principles as:

- A. Promote visitor understanding of, and increase appreciation for, America's natural and cultural resources and conservation history by providing safe, informative, enjoyable, and accessible interpretive opportunities, products and facilities.
- B. Develop a sense of stewardship leading to actions and attitudes that reflect interest and respect for wildlife resources, cultural resources, and the environment.
- C. Provide quality interpretive experience that help people understand and appreciate the individual refuge and its role in the Refuge System.
- D. Provide opportunities for quality recreational and interpretive experiences consistent with criteria describing quality found in 605FW 1.6.
- E. Assist refuge staff, volunteers, and community support groups in attaining knowledge, skills and abilities in support of interpretation.
- F. Minimize conflicts with visitors participating in other compatible wildlife-dependent recreational activities. (US Fish and Wildlife Service, 2006)

Bureau of Reclamation

The **Bureau of Reclamation's (BOR)** interpretive goals are:

- A. Informing the public about Reclamation and water projects;
- B. Enhancing the quality of recreation and tourism opportunities for all visitors, including those with physical, sensory, and cognitive impairments;
- C. Describing other opportunities and facilities that are available within the project;
- D. Providing information and interpretation on the recreational, natural, cultural, and historical resources within the project area and regionally;
- E. Helping to provide for visitor safety and enjoyment; and
- F. Educating the public about water resources, water conservation, and water safety. (Bureau of Reclamation, 2007).

U.S. Army Corps of Engineers

The **Corps** developed six goals of the ISOP program. These goals are:

1. Achieve management objectives using interpretive techniques.
2. Provide environmental education to foster voluntary stewardship of natural, cultural, and created resources.
3. Incorporate Corps civil works and military missions and accomplishments into interpretive programming.
4. Improve visitor and employee safety using interpretive techniques. Use outreach to accomplish ISOP goals, including interpreting Corps missions, promoting stewardship, saving lives, and solving management problems.
5. The interpretive process should also encourage interest in math and science, including career interest.
6. Enhance the visitors' experience and enjoyment by anticipating their needs and providing interpretive resources to meet those needs (Corps, 1993, p. 3).

APPENDIX D

Candidate Questions to ask group of creators of ISOP Program

There are six goals to the ISOP Program.

- 1) Achieve management objectives using interpretive techniques.
- 2) Provide environmental education to foster voluntary stewardship of natural, cultural, and created resources.
- 3) Incorporate Corps civil works and military missions and accomplishments into interpretive programming.
- 4) Improve visitor and employee safety using interpretive techniques. Use outreach to accomplish ISOP goals, including interpreting Corps missions, promoting stewardship, saving lives, and solving management problems.
- 5) The interpretive process should also encourage interest in math and science, including career interest.
- 6) Enhance the visitors' experience and enjoyment by anticipating their needs and providing interpretive resources to meet those needs.

SWOT Analysis Questions:

1. Of these goals, which do you think the Corps is currently meeting?
2. Which goals do you think the Corps could improve upon?
3. Which goals do you see opportunities for in the future?
4. Which goals do you see as threats to the success of the program?
5. What do you think are the successes of the ISOP?
6. What do you think are the weaknesses of the ISOP?
7. What do you see are opportunities for the ISOP in the future?
Near future < five years?
Distant future > five years?
8. What do you see are upcoming threats to the ISOP?
9. What do you think are the successes of the Corps Water Safety Program?
10. What do you think are the weaknesses of the Corps Water Safety Program?
11. What do you see are opportunities for the Corps Water Safety Program in the future?
Near future < five years?
Distant future > five years?
12. What do you see are upcoming threats to the Corps Water Safety Program?

Historic Questions

13. At most Corps projects only a few rangers actively engage in full-time interpretation. The remainder of the staff works in other programs, such as visitor assistance, contract administration, recreation, or natural resource management. Why is this? What are the historic trends re: interpretive work and staff at Corps lakes? Are there any notable examples or models?
14. Did you use another agency's template as a starting point for creating the ISOP program, if so Who and Why?
15. The Corps definition of Interpretation seems narrow the focus to agency missions, accomplishments and goals for the program. Why did the Corps take this approach when others have a more generalized and possibly flexible perspective?
16. How did you come up with the six goals of the ISOP program?
17. Why did you develop the ISOP program? When was it developed?
18. Did you consider Tilden's principles in the goals of ISOP? How do they relate?
19. What provoked another look at the ISOP program from the 1981 manual that first defined interpretation within the Corps?
20. Was there ever any thought put into putting together a formal evaluation process for programs?
21. Water Safety is not mentioned directly as a goal? Why? Was this done on purpose? Was WS a focus at the time of ISOP creation?

Probing Questions for Survey Questions

22. How do you feel about the program now X many years into it?
23. Do you think it is due for an update?
24. Would you change the goals now?
25. Where do you see ISOP going in the future?
26. Are you aware of any studies that measured the effectiveness of this program since its inception?
27. How do you feel about evaluation on this program? Challenges and goals for it
28. Why is interpretation always placed at the lowest value and always the first to get cut from funding in our agency? Do you think formal evaluations could change that? Was this discussed in the creation of the ISOP X many years ago?
29. Why did the COE choose to have "well rounded rangers" instead of specialists like other agencies?

30. Are their historic trends in Interpretive work in the COE?
31. Are their historic trends in staffing at COE lakes?
32. Has the idea ever been entertained that a figure could be entered into OMBIL that would give the \$-cost/benefit ratio that might help the program in hard times?
33. If you were to put a survey together listing the top five questions you would have for interpreters at the project level, what five questions would ask and want to know about?

APPENDIX E

Survey Instrument for Corps of Engineers Field Employees

U.S. Army Corps of Engineers Interpretive Services and Outreach

1. Introductory Page

This survey seeks to gain your perceptions on the effectiveness of the U.S. Army Corps of Engineers Interpretive Services and Outreach Program (ISOP). It also asks you to share thoughts on different focus areas of interpretation within the Corps. The information will be used to help improve the ISOP of the Corps. We estimate this survey will require approximately 30 minutes or less of your time. Please respond to each question as instructed. Thank you for your participation.

2.

1. How many years have you worked full time for the Corps?

Number of years

3.

2. Which District do you currently work in?

I work in

4.

3. On average annual basis, how many hours per week do you spend doing interpretive work?

- ☐ less than 5 hours per week.
- ☐ 5-9 hours per week.
- ☐ 10-19 hours per week.
- ☐ 20-29 hours per week.
- ☐ 30-40 hours per week.
- ☐ more than 40 hours per week.

5.

U.S. Army Corps of Engineers Interpretive Services and Outreach

4. What kind of planning documents has your project developed for interpretation? (please check all that apply)

	Do not have	Have, but needs revision	In development	In revision	Actively in use
Interpretive Master Plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comprehensive Interpretive Plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Interpretive Prospectus	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Operations Management Plan with interpretation section	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other Planning Document	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6.

5. To what extent do you incorporate the following concepts into your interpretive work?

	Never	Seldom	Occasionally	Frequently	Regularly
Tangible/Intangible links	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interpretation as meaning making	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Opportunities for intellectual and emotional connections	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interpretation as a tool to aid in other areas of work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interpretation as a tool to explain other missions of the Corps	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Knowledge of Audience	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interpretive Equation (KR + KA x AT = IO) or Knowledge of the Resource + Knowledge of the Audience x Appropriate Technique = Interpretive Opportunity)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

7.

6. How often do you utilize the Corps Gateway website for sharing interpretive program ideas?

	Never	Seldom	Occasionally	Frequently	Regularly
Frequency of use	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

U.S. Army Corps of Engineers Interpretive Services and Outreach

8.

7. In the last 3 years, have you received less funding for the ISOP program?

☐ No

☐ Yes

8. If you answered yes to the above question, When funding is limited, to what extent are these items affected at your project?

	Not affected at all	Affected a little	Moderately affected	Quite affected	Completely affected (eliminated)	I don't know
Conducting Special Events	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Conducting School Programs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Conducting Dam Tours	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Conducting Campfire Programs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Operating Visitor Center	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Building New Exhibits	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Creating brochures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hiring seasonal staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recruiting Volunteers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Conducting Water Safety outreach	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Conducting other Interpretive Outreach programs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

9.

9. If you were to increase your interpretive efforts by 10% (equivalent to 4 hours per week), what other aspects of your job might be sacrificed at your project? In other words, what would be affected if you increased your interpretive efforts?

10.

U.S. Army Corps of Engineers Interpretive Services and Outreach

10. What training have you taken in interpretation? Please check all that apply.

- ☐ Certified Interpretive Guide training with NAI.
- ☐ Corps PROSPECT course Interpretive Services.
- ☐ District interpretation training.
- ☐ Division interpretation training.
- ☐ Eppley Institute for Parks and Public Lands courses.
- ☐ Local project interpretation training.
- ☐ National Interpreters Workshop.
- ☐ University coursework.
- ☐ Other.

Other (please specify)

11.

11. How long ago did you take the Corps PROSPECT course titled "Interpretive Services"?

- ☐ Within the last year.
- ☐ Within the last 2-5 years.
- ☐ Within the last 6-10 years.
- ☐ Over 10 years ago.
- ☐ I have never taken the PROSPECT for Interpretive Services.

12.

12. How interested are you in taking a Corps PROSPECT course in Advanced Interpretive Services?

	Not at all interested	Mildly interested	Interested	Very Interested
Interest Level	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If interested, what topics would you like to see included as part of this course?

13.

U.S. Army Corps of Engineers Interpretive Services and Outreach

13. With whom do you have partnerships related to the Interpretive Services and Outreach Program at your project? (please check all that apply)

	Official (MOU, MOA, etc.)	Unofficial (Unwritten with no signatures)	Don't know
Other federal agencies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
State agencies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Local government	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cooperative Associations or Friends group	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Non-profit groups	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other partnerships	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If you checked "Other partnerships" related to the Interpretive Services and Outreach Program at your project, please use the box below to list those partnerships.

14.

14. In recent years, the Corps has put more emphasis on development of official partnerships. If you checked unofficial to any of the partnerships in the previous question, what has hindered your project from making these partnerships official? (please check all that apply)

- ☐ The paperwork for making partnerships official is unnecessarily complex.
- ☐ It takes too long to get signatures from higher authorities.
- ☐ Partners are uneasy about signing paperwork to make it official.
- ☐ I was unaware of the need to make partnerships official.
- ☐ I do not have enough time to create the partnership agreement forms.
- ☐ Other.

If you checked the Other box in the above question, please use the box below to explain on why you use unofficial partnerships.

15.

U.S. Army Corps of Engineers Interpretive Services and Outreach

15. Have you read the current regulations on the Corps Interpretive Services and Outreach Program, EP 1130-2-434, dated 30 September 1993 and ER 1130-2-550 Chapter 4, dated 15 November 1996 revised 15 August 2002, and if so, how long has it been?

	within the last 6 months	6 months to 1 year	between 1 year and 5 years	more than 5 years	I've never read it
EP 1130-2-434, dated 30 September 1993	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ER 1130-2-550 Chapter 4, dated 15 November 1996	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

16.

U.S. Army Corps of Engineers Interpretive Services and Outreach

16. The Corps developed six goals of the Interpretive Services and Outreach Program. Please indicate the level of IMPORTANCE you attach to each of these goals for your DISTRICT/PROJECT level (Corps, 1993, p. 3).

	Very Unimportant	Unimportant	Neither important nor unimportant	Important	Very important
1) Achieve management objectives using interpretive techniques.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2) Provide environmental education to foster voluntary stewardship of natural, cultural, and created resources.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3) Incorporate Corps civil works and military missions and accomplishments into interpretive programming.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4) Improve visitor and employee safety using interpretive techniques. Use outreach to accomplish ISOP goals, including interpreting Corps missions, promoting stewardship, saving lives, and solving management problems.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5) The interpretive process should also encourage interest in math and science, including career interest.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6) Enhance the visitors' experience and enjoyment by anticipating their needs and providing interpretive resources to meet those needs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

17.

U.S. Army Corps of Engineers Interpretive Services and Outreach

17. The Corps developed six goals of the Interpretive Services and Outreach Program. Please indicate how EFFECTIVE you think the Corps has been at achieving each goal at your DISTRICT/PROJECT level (Corps, 1993, p. 3).

	Completely ineffective	Somewhat ineffective	Neither ineffective nor effective	Somewhat effective	Very effective
1) Achieve management objectives using interpretive techniques.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2) Provide environmental education to foster voluntary stewardship of natural, cultural, and created resources.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3) Incorporate Corps civil works and military missions and accomplishments into interpretive programming.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4) Improve visitor and employee safety using interpretive techniques. Use outreach to accomplish ISOP goals, including interpreting Corps missions, promoting stewardship, saving lives, and solving management problems.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5) The interpretive process should also encourage interest in math and science, including career interest.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6) Enhance the visitors' experience and enjoyment by anticipating their needs and providing interpretive resources to meet those needs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

18.

U.S. Army Corps of Engineers Interpretive Services and Outreach

18. Please indicate your level of agreement with each statement with respect to your current project.

	Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree
ISOP goals are appropriate.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ISOP goals are achievable.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ISOP goals need to be updated to better reflect current conditions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

19.

19. What types of evaluation procedures, if any, do you use to evaluate your ISOP program? Please check all that apply from the list below.

	Developed	Actively Use	Not Used
Suggestion drop box	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Teacher evaluation forms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Generic program evaluation forms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Use of an external evaluator	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
OMBIL statistics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Record of repeat invitations from schools	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Informal feedback	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Visitor center comment cards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If the other box was checked above, please list the other evaluation procedures used at your project.

20.

U.S. Army Corps of Engineers Interpretive Services and Outreach

20. How often do you formally evaluate your interpretive program at your project?

	Never	Seldom	Occasionally	Frequently	Regularly	N/A
Special events	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
School programs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dam tours	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Campfire programs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Visitor center exhibits	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Brochures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Seasonal employees auditing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Water safety programs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other interpretive programs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

21.

21. What percent of the time you spend working on interpretation is dedicated to water safety efforts?

- ☐ 20% or less
- ☐ 21-40%
- ☐ 41-60%
- ☐ 61-80%
- ☐ 81-100%

22.

U.S. Army Corps of Engineers Interpretive Services and Outreach

22. How often do you use the following methods of Water Safety promotion at your site?

	Never	Seldom	Occasionally	Frequently	Regularly
Water safety programs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Water safety videos	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Life jacket loaner board	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Parades	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Water safety products from headquarters	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Water safety products from district	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Water safety products purchased by project	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Billboards	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Buoys	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Painted boat ramps	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Water safety mascot	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bobber the Water Safety Dog	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Safe Passage	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Young and the Reckless	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Informal contacts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please list other ways your project promotes Water Safety.

23.

23. In 2006, a directive came down from General Strock at headquarters to decrease the number of recreation related fatalities by 40% at Corps projects by September 2008. Has your project spent more money on water safety since General Strock's mandate?

- ☐ No
☐ Yes

24.

U.S. Army Corps of Engineers Interpretive Services and Outreach

24. Besides funding, what resources and other support would help you improve the quality of USACE interpretive programs at your project?



25.

25. If your project has one or more designated Interpretive Specialists are you that person?

- ☐ No
- ☐ Yes
- ☐ My project doesn't have a designated ranger for ISOP duties.

26.



U.S. Army Corps of Engineers Interpretive Services and Outreach

26. To evaluate the effectiveness of the ISOP program within the Corps, it is critical to understand the experiences and perspectives of the ranger staff in the field. Please indicate your level of agreement with each of the following statements.

	Strongly disagree	Disagree	Neither disagree or agree	Agree	Strongly agree
1. DISTRICT management supports ISOP as a management tool.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. PROJECT management supports ISOP as a management tool.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. PROJECT management supports ISOP through the allocation of staff TIME.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. PROJECT management supports ISOP through the allocation of FUNDING.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. ISOP benefits my project by communicating with the public about project missions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. ISOP benefits the project by interpreting the project's natural, built, or environmental features.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. ISOP benefits the project by using interpretation to help increase compliance with project rules and regulations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. ISOP has improved the Corps image and community relations in my area.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Interpretive skills help me manage other programs for which I am responsible.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. I do not enjoy the interpretive part of my job.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. I see a value in learning and applying interpretive skills to my job.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. Interpretation at my project positively affects people's lives and well being.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. Interpretation at my project provides opportunities for visitors to connect with the meanings of the resources.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. My project provides visitors with information rather than interpretation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. My project is doing all that it can to provide quality interpretive services and outreach to the public.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. ISOP is critical to the natural resources program of the Corps.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. Partnerships are the wave of the future for the ISOP.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. Volunteers are critical to the survival of the ISOP.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

27.

U.S. Army Corps of Engineers Interpretive Services and Outreach

27. What GS level are you? (or what is your GS level equivalency in the new NSPS system?)

	GS Level
I am a GS	<input type="text"/>

28.

28. How many people do you supervise?

- ☐ 1 employee.
- ☐ Between 2-5 employees.
- ☐ Between 6-10 employees.
- ☐ More than 10 employees.
- ☐ I am not a supervisor.

29.

29. What is your gender?

- ☐ Female
- ☐ Male

30.

30. Do you have any suggestions to improve the Corps Interpretive Services and Outreach Program? If yes, please list them in the box below.

31. Thank You

Thank you for participating in the survey. This survey is being conducted as part of a research project in conjunction with Stephen F. Austin State University analyzing the Corps Interpretive Services and Outreach Program from the perspective of the rangers in the field. The results will be posted to the Gateway when they become available. For additional questions about the survey or the research project, please contact Alana Mesenbrink at alana.f.mesenbrink@usace.army.mil

Thank you again for your time and dedication!

VITA

Alana F. Mesenbrink holds a Bachelors of Science in Fisheries and Wildlife from the University of Missouri, Columbia. During college, she started her career with the Corps in 1994 at Lock and Dam 24 and 25 on the Mississippi River. She continued her career through 4 divisions: Mississippi Valley, North Atlantic, South Pacific and Northwestern Divisions and has had a wide variety of experiences as a park ranger in Missouri, Pennsylvania, New Mexico and Montana. She is currently employed as a natural resource specialist at Libby Dam in northwest Montana. She graduated with a Master of Science in Resource Interpretation from Stephen F. Austin State University in August of 2013.

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This thesis follows the style of the American Psychological Association (APA).

This thesis was typed by Alana F. Mesenbrink.